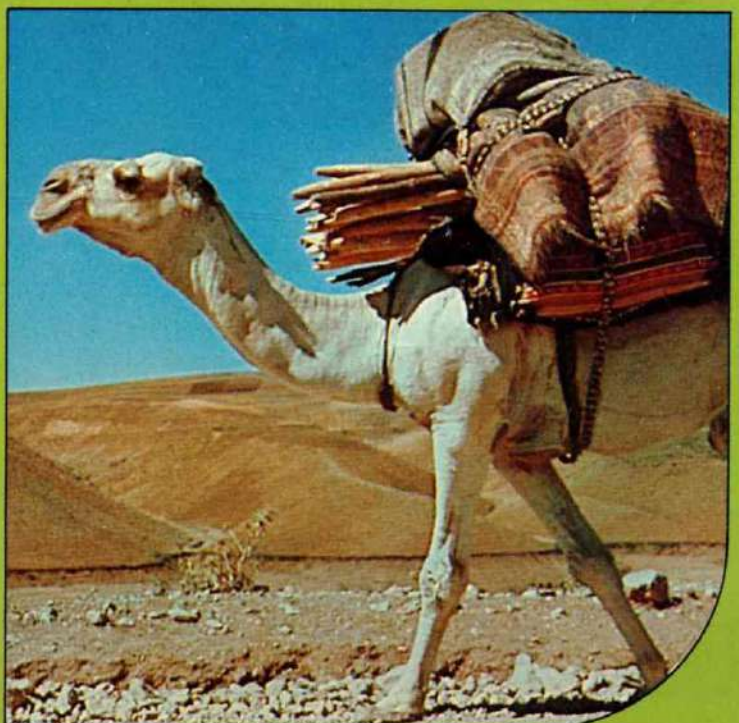
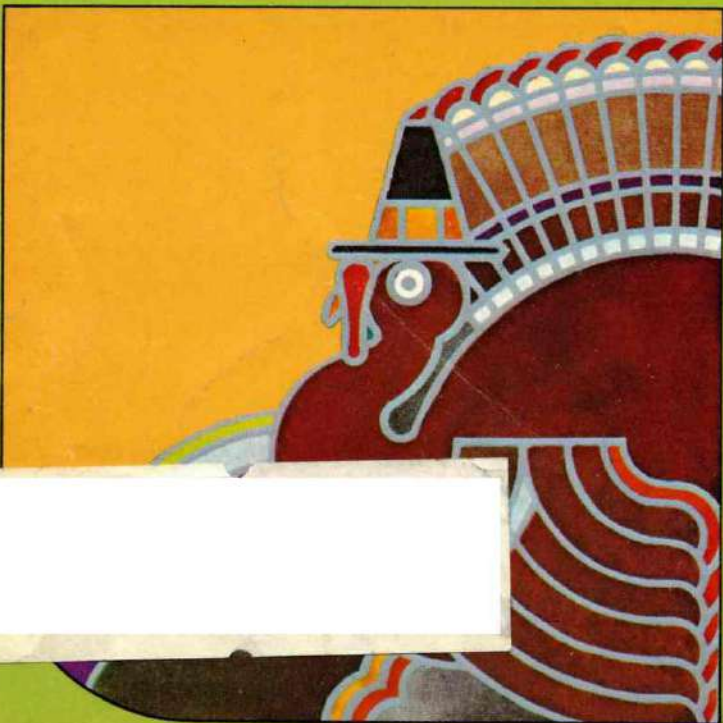


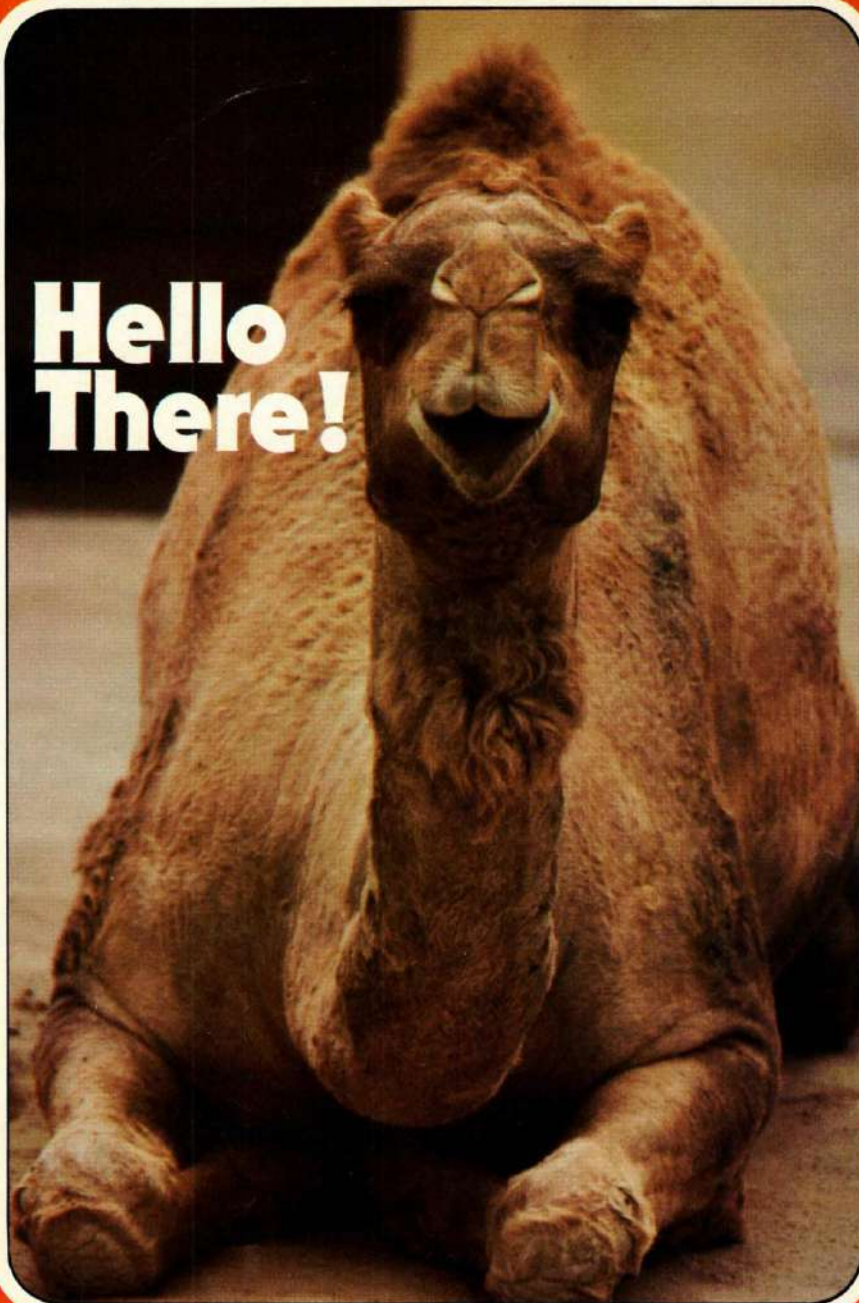
# 321 CONTACT™

Inside: A Bloodhound Gang Mystery!





# Hello There!



Chances are the only place you ever see a camel is at the local zoo. But in some countries, people own and raise their own camels. In these desert lands, camels are an important source of food and transportation.

On page four, you will meet a kid who lives in the desert and takes care of his family's camels. After you do, turn to page seven. There you will find out why, from its nose to its hump, the camel is the perfect desert animal.

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Page 4

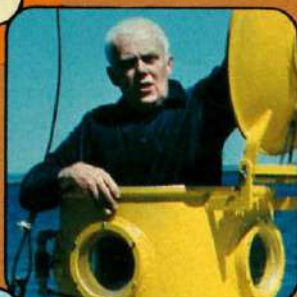


Page 8

# 321 CONTACT



Page 10



Page 22



Page 24



Page 26



Page 32



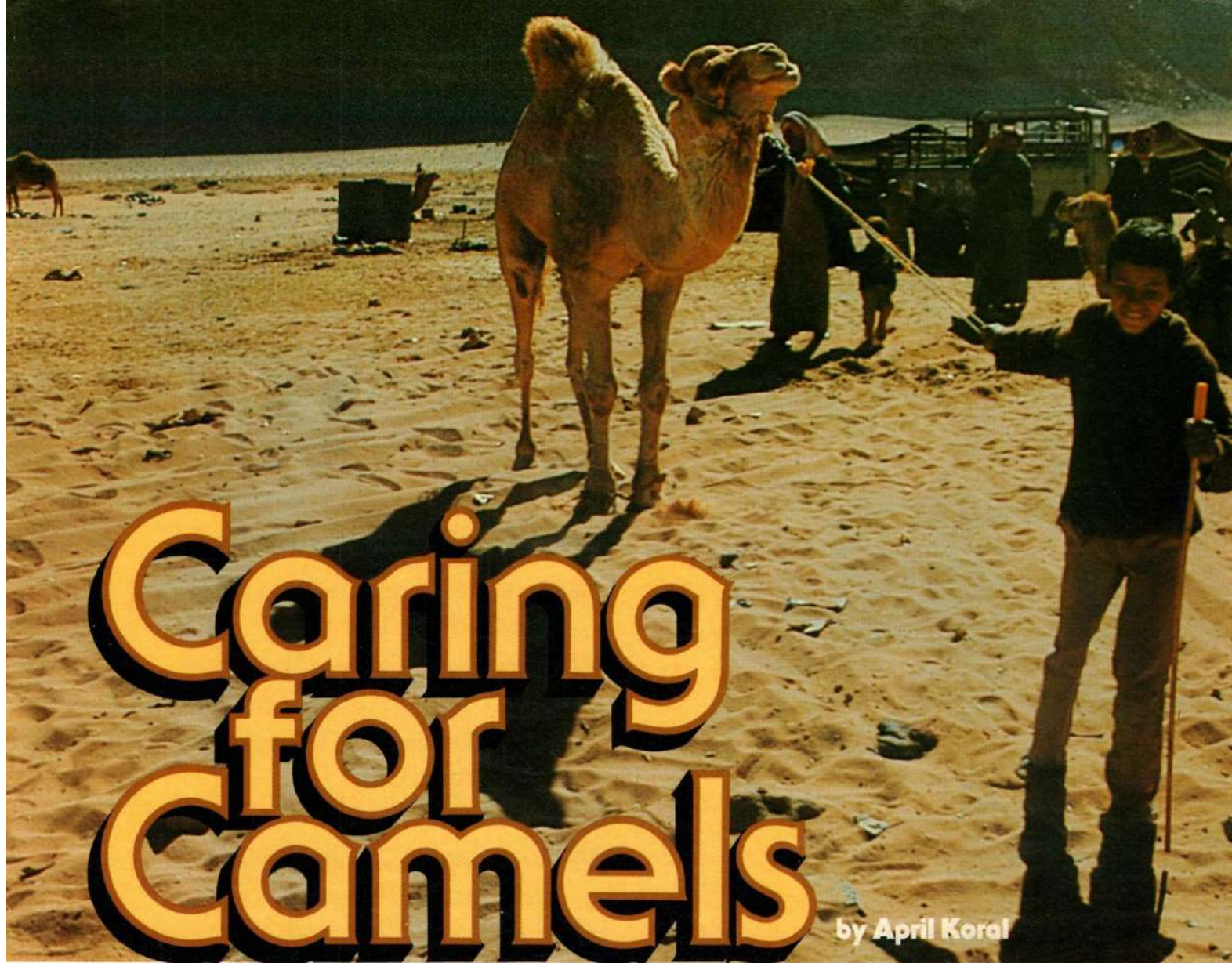
## Featuring This Month

- 4** Caring for Camels: The Life of a Bedouin Boy
- 12** Bloodhound Gang: The Case of the Golden Lining (Part Two)
- 15** Don't Be Afraid to Take This Halloween Quiz
- 20** Halloween Poster
- 26** Flying into the Storm: Ride with a Hurricane Hunter

## Plus Our Regular Departments

- 8** Factoids
- 10** Contact Report
- 18** Any Questions?
- 22** List of the Month: Nature's Nasties
- 24** Earth Days: November
- 29** Do It!: Hurricane Maze
- 30** Timeline: Radio
- 32** Mail
- 34** Reviews and Previews
- 36** Experiment: Invisible Ink
- 37** Did It!
- 39** Earth Works: Hurricanes





# Caring for Camels

by April Koral

## THE LIFE OF A BEDOUIN BOY

If you are like most kids, you probably dream of driving a car of your own someday. But there's a 12-year-old boy, named Abdullah, who would much rather have a camel he could call his own. A camel? Yes, because Abdullah lives in the desert. People can travel a lot faster over sand dunes on the back of a camel than they could in the snazziest sports car.

Abdullah and his family are members of a desert tribe called Bedouins (BED-uh-wins). They live in the Middle East in the country of Jordan. It is next to Israel and not too far from Egypt.

For hundreds of years, Bedouins have wandered there, moving from place to place on the backs of their camels. But today, their life is changing. Many of them have settled down to live longer in one or two places.

Abdullah's family makes their summer home in a large valley named Wadi Rum. They own a

pickup truck and several camels. The camels are still very useful to Abdullah's family. Gasoline is very expensive in Jordan. And there are some places that pickup trucks just can't go. A few months ago, for example, Abdullah and his family went to visit friends from the same tribe. They live seven miles away, on the other side of the valley. There is no road, so Abdullah's family couldn't drive. But the soft sand was easy for their camel to walk on.

### Going for a Camel Ride

Riding a camel can be exciting. But first Abdullah must get aboard. That isn't easy. Camels are nearly nine feet tall. So when Abdullah wants to go for a ride, he must ask his father for help. His father thumps the big animal on the shoulders and rear with a stick. "Sit," he commands. The camel obeys, bending its long front legs and kneeling to





the ground. Abdullah must be careful not to let the 1,600-pound camel step on his toes. He climbs on and rides without a saddle.

The ride is a lot of fun. But you might find it a little rough. Camels sway from side to side when they walk. First, both legs on the left side of their body move forward at the same time. Then both legs on the right side take a step. The result is a bumpy ride that can make you feel "seasick."

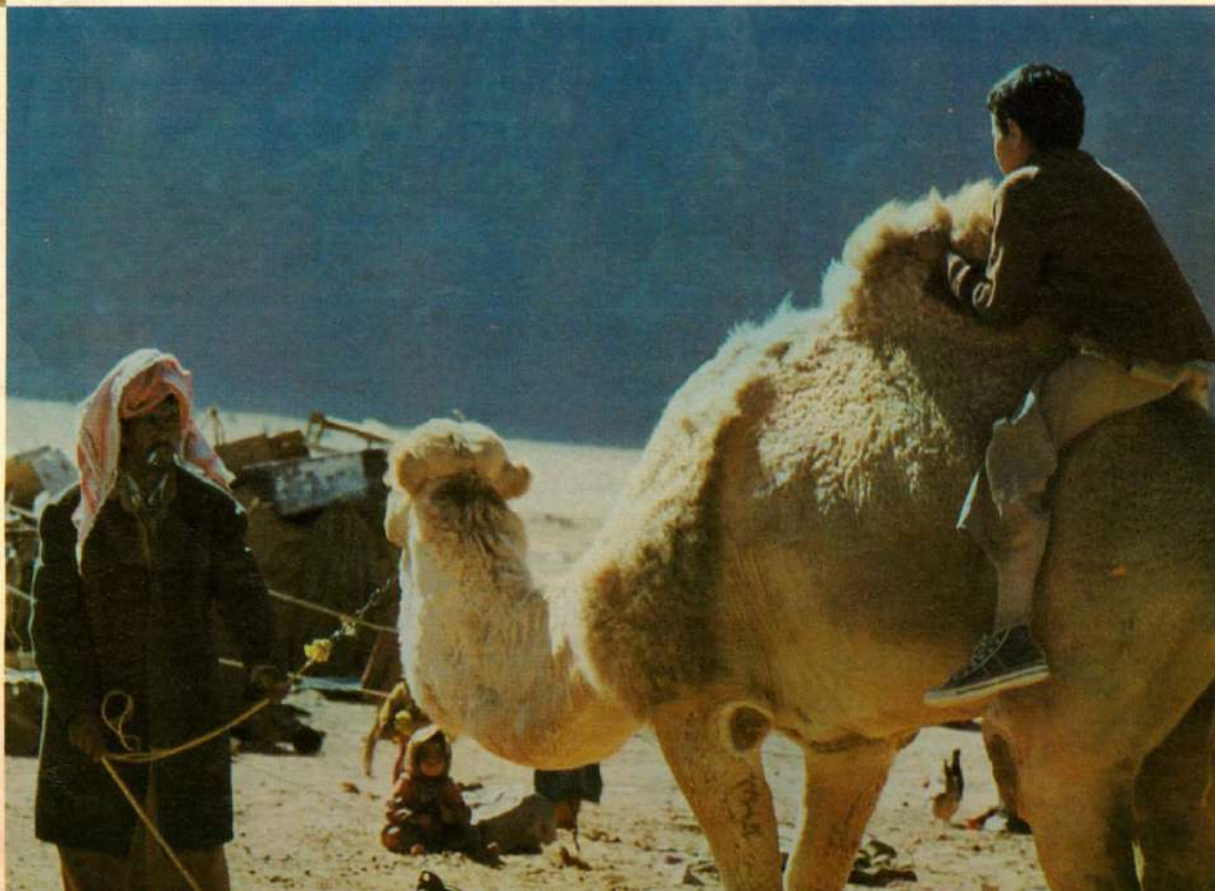
The ride gets even bumpier for Abdullah when his camel picks up speed. But he just bounces along and enjoys the adventure. ➡➡



**Left:** Mixing the grain to feed the camel is a daily job for Abdullah.

**Above:** Abdullah gets ready to go for a ride. He likes to ride without a saddle. But some of his friends use a heavy saddle when they ride camels.

**Right:** Easy does it! Abdullah must be careful not to fall, as he gets down from the nine-foot tall camel.





At home, it's Abdullah's job to take care of the camels. That's not hard work. Each camel needs very little attention. "I only have to give him a drink of water once a week," he says, "though I feed him straw and barley every day. I don't even have to clean him. Every once in a while, he rolls over in the sand and gets himself clean."

But Abdullah has a few other camel-related jobs to do. That's because his family uses their camels for more than just getting around. The female camels must be milked. The dry camel droppings are collected and used to make fires. And in the spring when camels shed their hair, it must be gathered up. Later it will be used to weave clothing and blankets.

### Living in a Tent

In many ways, Abdullah's daily life is different from yours. His home, for example, is a long, low, goat's-hair tent. Hanging rugs divide it into "rooms." Abdullah shares a room with one of his three brothers. One side of the tent is usually left open so a summer breeze can cool the family members or a winter sun can warm them.

The floor of the tent is sand. There is no television or electricity. For light, a fuel called kerosene is burned in a small lamp. The family's one luxury is a small transistor radio.

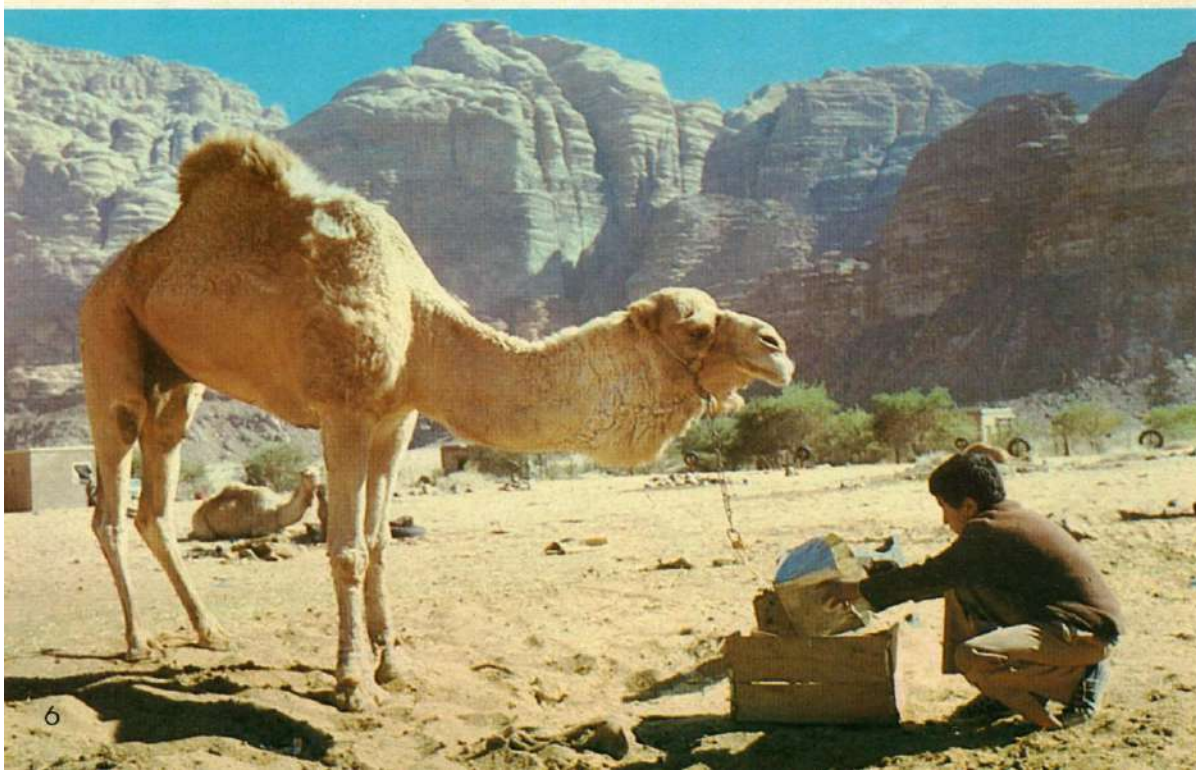
The Bedouin diet is simple. Breakfast is usually bread and dates. For lunch and dinner, there's hot cereal, such as barley, oats or mush. Sometimes there are eggs and, on special occasions, roast lamb and rice. During the day, everyone drinks a lot of sweet tea.



**Above:** Abdullah lives in a tent made from goat's hair. Rugs divide the tent into rooms. Abdullah shares a room with his brother.

Abdullah wears pants and a shirt, but he has very few changes of clothes. Sometimes he wears a *kafiya*, a traditional Arab head covering made from a square cloth. It protects him from the summer sun and keeps his head warm in winter.

At the one-room school nearby, Abdullah must often miss classes. His family has to go south in winter to look for greener pastures for their sheep and goats. Abdullah's favorite subject in school is English. "One day," he says, looking out at the flat, endless desert, "I would like to be a teacher." And his camels? "Oh," he says, "I'd take care of them on weekends."



**Left:** Once in a while, Abdullah's family fattens up a camel and kills it to provide meat to eat.



# Ship of the Desert

Imagine an animal that can walk all day without getting tired, carry 500 pounds on its back and go without food and water for days at a time.

That animal is the camel. Although it spits, smells bad and makes unpleasant noises, people who live in the desert think the camel is terrific.

Camels are perfectly suited for hot, dry weather. Their bodies are built to save every drop of water they drink. To begin with, a camel is well-padded with a tough skin and coarse hair. Its body takes a long time to heat up. So a camel doesn't have to cool off by sweating a lot. Sweating is one way that animals—and people—lose water from their bodies.

Another secret to the camel's success in the desert is its nose. When other animals breathe out,

they lose water in the form of water vapor. People do that, too. That's why you see a cloud of water vapor when you breathe on a cold winter morning.

Inside a camel's nose are very long air passages. They trap water vapor inside the camel's body. So every time a camel breathes out air, the lining of its nose is keeping its water supply safe.

Camels aren't bothered when the sandy desert winds blow. They have three sets of eyelids to protect each eye. These lids keep out the gritty sand. Camels can also shut out dust from their noses and lips by closing them very tightly.

Finally, there's the camel's real trademark—its hump. This lump of fatty tissue serves as the animal's food supply when food is scarce. Thanks to its hump, a camel can go several weeks without eating. When that happens, most fat inside the hump gets used up. Until the animal can eat again, the hump will be small and flabby.

The hump is one reason the camel is called the "ship of the desert." Like a ship at sea, a camel is built to carry everything it needs on a long journey.

Camels are the perfect animals for desert work. When Bedouin families move to a new place, camels carry their folded-up tents and poles.





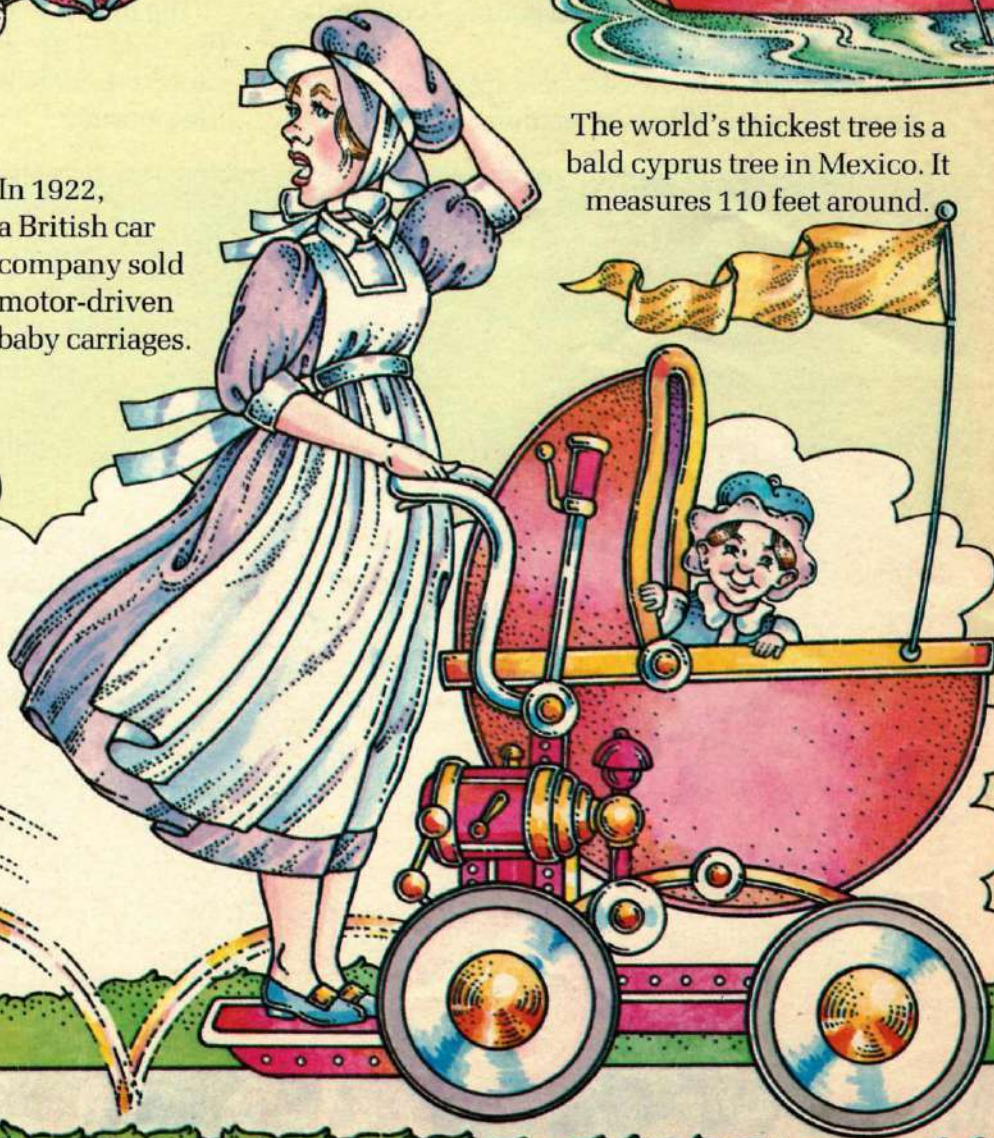
# Factoids

What are factoids? They are weird little facts that are stranger than strange, truer than true. Use them to wow your friends, amaze your family and dazzle your teachers.

Scott Spencer, age 13, traveled six miles on his pogo stick to set a world record.



In 1922, a British car company sold motor-driven baby carriages.



The world's thickest tree is a bald cypress tree in Mexico. It measures 110 feet around.







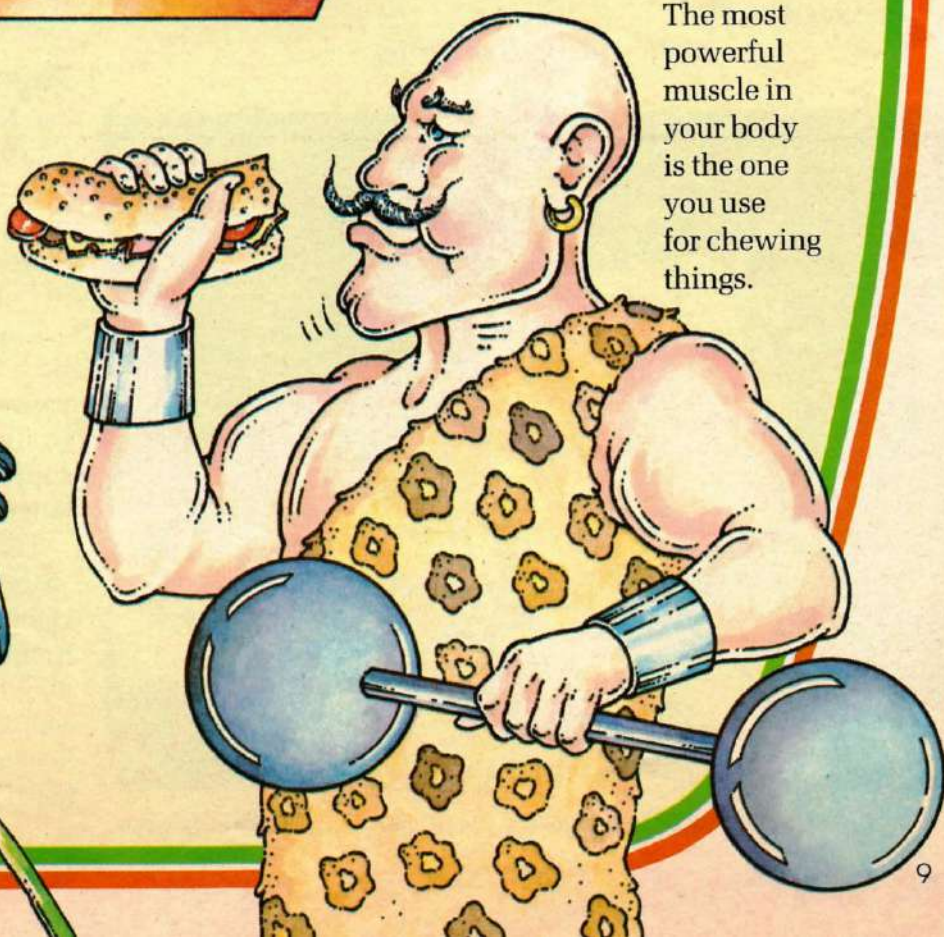
Pandas have  
an extra thumb  
that grows from  
their wrists.



Potatoes are made  
of 80% water.



A cricket  
hears through  
its front legs.



The most  
powerful  
muscle in  
your body  
is the one  
you use  
for chewing  
things.



# Contact Report

**Ahoy Down There!** A submarine is a big underwater ship, right? Well, not always. Now there's a new submarine that is only about 14 feet long. That's about the size of a row boat. This mini-sub holds one person.

George Kittredge of Maine designed the new submarine. As a retired navy captain, he wanted to help people explore the exciting world under the ocean. So he built his little sub with a porthole in the bottom. It gives you a chance to look at the ocean floor and all the passing plants and fishes.

Submarines were first used as warships. Modern ones carry many sailors and weapons. But today's one-passenger sub is mostly for fun and adventure. Made of metal, the little submarine can safely dive down to 250 feet. It runs cheaply on batteries which can be re-charged. But no matter how much you love the sea, you're not likely to save up and buy a little sub. Each one costs \$16,000!

—Written by Marilyn Norris



People can explore the ocean floor in a mini-sub.



Colorado students want a fossil they can call their own.

**Favorite Fossil** California has the saber-toothed cat. Nebraska has the mammoth. Now some fourth graders in Thornton, Colorado, want their state to have an official fossil, too. Stegosaurus is the choice of students at McElwain Elementary School. Fossils of this dinosaur were first found in Colorado in 1937.

The fourth graders asked state Senator Polly Baca Barragan to help them. She agreed to try to pass a law about a state fossil—if the students would lobby, or work to get other lawmakers to support it. The class did its lobbying by writing letters to the Colorado legislators.

Three students also spoke to the legislature. "Stegosaurus was a unique dinosaur," said Troy Hancock. "It had armored plates on its back." Kenny Keene explained, "It had a nerve center which controlled the movements of its tail." Monica Barragan summed it all up, "It would just be neat to have the stegosaurus as the state fossil."

—Written by Carol Fertig



# Contact Report

**Spider Love Call** Did you think birds and people were the only animals that sing? Now a researcher in Florida has found that some spiders sing, too.

G.B. Edwards discovered that the male jumping spider sings when he courts the female. He doesn't sing from the throat like people and birds. Instead, he makes his trilling song by rubbing together certain parts in his mouth. This two-tone singing can be heard three feet away.

Male spiders usually court females in other ways. Some shake the threads of a female's web. Others wave their legs or bodies in a sort of dance. Only the jumping spider sings love songs to get his lady's attention.

—Written by Marilou Carlin

This jumping spider sings love songs.



Pigs are helping dentists fix teeth.

**Braces for Miss Piggy?** A pig is rolled over on its side. It's given a shot to make it sleep. Then some doctors put braces on its teeth. Braces for a pig? That's right. The pig is part of a plan to help dentists to straighten people's teeth better.

Why pick on a poor pig? Their teeth and human teeth are almost exactly alike. But pig's teeth are one fourth larger. That makes them much easier to work on. So pigs' teeth were wired up with metal bands, cement and rubber bands by experts at the University of Oregon.

What they've found is that teeth get crooked when bones grow at different rates. The doctors used a special microscope to look at a section of a pig's jawbone. They measured how much it grew in two months. This helped them to tell dentists exactly when it's best to fix pigs' and people's teeth. And that's not hogwash!

—Written by Beverly Pelto

**What's That?** Have you seen a story in a newspaper or magazine that belongs in the Contact Report? Why not cut it out and send it to us? Be sure to include your name, age, address and the place you found the story. Send it to:

**The Contact Report**  
**3-2-1 CONTACT**  
**P.O. Box 599**  
**Ridgefield, NJ 07657**



# The Bloodhound Gang



## The Case of the Golden Lining

Part Two

by Madeline Sunshine

In last month's episode, the Bloodhound Gang arrived at NASA headquarters in Houston. While touring the center, they discovered that an astronaut's helmet on display had a phony heat shield visor. They then learned that another helmet was about to be used by an astronaut in a dangerous radiation test. They had to stop the test before it was too late!

Vikki, Ricardo and Zack, otherwise known as the Bloodhound Gang, stood waiting at the security desk with Dr. Fripp. After what felt like an hour, but was really only a few seconds, the Chief Security Officer, Bill Chaney, beckoned to one of his young officers.

"Quick! Take over here," he said. "I'll be back as soon as I can." Then he motioned for Dr. Fripp and the Bloodhound Gang to follow him.

In less than a minute, they were in the guard's car, racing down the road toward the Astronaut Training Building. The guard hurriedly switched on his siren, which shrieked out a warning to anyone in their way.

"Look!" cried Zack. "In the parking lot—it's the tour bus. And it's empty!"

"Oh no!" whispered Vikki. "If everyone's inside, that means the test has probably begun!"

Dr. Fripp and the Bloodhound Gang were out of the car and inside the building before Officer Chaney could even turn off the engine. The tour guide and all the other people who had been on the tour bus, stopped and stared as they zoomed past the visitors' area. They were in such a rush, they hardly even glanced at the astronaut test on display in the air-tight, sound-proof room.

"Hold it! Wait! You can't go back there! You're not authorized!" shouted a guard.

"It's all right. I'm Dr. Phineas Fripp. This is the famous Bloodhound Gang. We must stop the test that's going on before that astronaut gets hurt!"

### The Test Is Stopped

"Let them pass!" Chief Officer Chaney shouted, catching up with the others. "It's an emergency!"

They hurried through a huge, lead door and ran toward a control center swarming with scientists



and technical advisors. Dr. Fripp banged on the locked door, until at last it was pulled open by a surprised-looking woman wearing a white lab coat.

"Why, Dr. Fripp!" she exclaimed. "Are you all right? What's going on?"

Dr. Fripp, who was too out of breath to speak, pointed to Zack.

"It's the visor," said the boy. "The one on the helmet the astronaut is testing right now. We think it's a fake—a plastic toy, like the one we found in the Space Museum."

"That's why you've got to stop the test!" Ricardo went on. "You've just got to. Otherwise. . ."

"You don't have to explain any further," the woman broke in. She turned to a control board and began shutting off switch after switch after switch.

## More Visors Are Found

When everything was under control again, and the astronaut was led out of the test room, Dr. Marion Martels turned to Vikki, Ricardo, Zack and Dr. Fripp. "We've examined the visor," she said. "And you were right. Here." She handed it to Zack. "Look for yourself. . . Nothing but a cheap imitation of the kind we use." Then she gave him a real visor to look at. He turned it over in his hands. Then he passed it on to Vikki and Ricardo. "Had you folks not warned us," Dr. Martels continued, "well, I don't even want to guess at what would have happened."

"Yes," said Joe Mackey, the astronaut who'd been wearing the visor. "I want to thank you all. But I don't understand something. Why would anyone want to steal my visor? Do you think someone has it in for me?"

"I doubt it," said Vikki. "I mean, if it were just you they were after, why would they have switched the one in the museum, too?"

"You're right, as usual," agreed Dr. Fripp. "There's got to be another reason—like maybe sabotaging the entire space shuttle program. And if that's it, I've got a perfect suspect for you: that reporter on the bus. She said if it were up to her, this whole program would be scrapped!"

"Whoa!" said Ricardo. "I think we're going too fast. Before we decide on our suspects, we have to figure out exactly what happened. First of all, we should find out about all the other visors at the space center. Could they be fakes, too?"

"I don't know," said Dr. Martels. "Somehow I

can't believe that."

"Well then, maybe the bad ones all came from one shipment," Zack suggested. "Has there been a new shipment of helmets and visors recently?"

Dr. Martels wasn't sure, but Officer Chaney said he'd seen a batch being unpacked in the shipping area that very morning.

## The Suspects

After promising to keep Dr. Martels and astronaut Mackey informed, Chaney, Fripp and the Bloodhound Gang took off to find out about that shipment of visors. It took several hours, but by the time they were done, they'd traced every new helmet and visor—50 in all—that had been part of the new shipment. In each case, the helmet itself was fine, but the visor was phony.

"It just doesn't make sense," said Dr. Fripp, as he, Security Officer Chaney and the Bloodhound Gang sat down to discuss what their next move should be. "Why substitute fake visors? Why not fake helmets or space suits, or. . . I don't know. . ."

"Wait! Maybe I do," said Vikki. "Remember what the tour guide said? It's the gold! There's no gold in the helmets or the suits. But the visors are lined with pure gold."

"Hey, yeah," Ricardo sang out. "Fifty visors lined with pure gold have got to be worth a lot of bucks!"

"Just under fifty dollars, to be precise," Dr. Fripp chuckled. "And I don't think that's a lot by anyone's standards."

"Fifty dollars!" exclaimed Zack. "You're kidding, right?"

"No, I'm not. You see," Dr. Fripp explained, "the gold lining in each helmet is worth a little under one dollar. That's because the lining isn't a chunk of gold, it's a thin coating—almost like paint."

"How do they get it on that thin?" Zack wanted to know.

"It's sprayed on in a vacuum chamber," Dr. Fripp replied. "The surface of the visor is cold, and so, in the vacuum chamber, the spray sticks to the visor's cold surface. The visor's lining is sprayed on to a thickness of 350 angstroms," he continued. "And, since one angstrom is equal to one ten-millionth of a millimeter, that should give you some idea of how little gold is actually used. No," he finally concluded. "On the face of it, it doesn't look like robbery could be the motive."



"You said something about sabotage before, Dr. Fripp," said Officer Chaney. "Maybe you were right."

"That could be," Vikki considered. "But maybe it's not the reporter who's responsible. It could be the man with the camera, or even Mr. Jennings. Both of them seemed pretty suspicious to me."

"Yeah," said Zack. "Especially Jennings. I really think he's a spy."

"It could also be someone who works here in our cargo area," Chaney put in. "Don't forget, that's where I saw the visors being unpacked."

"Okay," Ricardo said to the others. "Let's recap. So far, our suspects include the reporter, someone who works in the cargo area, the man with the camera and Mr. Jennings. We also know what it was our suspect did. What we don't know right now is why."

"That means," Vikki continued for him, "we've got some more investigating to do."

"Yup!" said Zack. "And not a lot of hours to do it in. The people on the tour are all staying over until tomorrow morning to see the shuttle go up. Then, as far as I know, they'll be leaving. That means, if we don't figure everything out by then, we lose our prime suspects."

"I say we split up into two groups," Vikki offered. "That way we can save some time."

The others agreed. It was decided that Security Officer Chaney, Zack and Ricardo would catch up with the tour and check out Jennings, the reporter, and the man with the camera. Since Dr. Fripp was familiar with the employees in the cargo area, his appearance there wouldn't create any suspicion. So, that's where he and Vikki would go. They arranged to meet back at the Astronaut Training Building in an hour. Then the two groups took off.

When Vikki and Dr. Fripp got to the cargo area, it was almost deserted and the few people who were around were getting ready to leave.

## Searching for Clues

"Where shall we begin?" the doctor asked his detective companion.

"Let's take a look in the room where Chaney said he saw the boxes of visors and helmets being unpacked. Maybe we'll find some kind of clue as to what's going on in there." She pointed out a large,

semi-lit room at the end of the corridor. The two of them tiptoed down the hallway and quietly entered it, all the while hoping that if they were spotted, they'd look as if they belonged.

Once inside, they began to check out the various cartons lining the floor. At Vikki's suggestion, they kept a special eye out for those that had been sent by the helmet and visor manufacturer. Soon, they were so wrapped up in what they were doing, they didn't notice the tall, white-suited maintenance worker who stood plastered against the wall observing their every action.

"The visors!" Vikki cried, crawling toward a huge, brown, half-ripped carton. "I've got the real. . ."

But she never had time to finish her sentence; for all at once, a large hand was slapped over her mouth. At the same time, she was pulled roughly to her feet.

"What was that, Vikki?" Dr. Fripp prompted. "What were you going to say?" He looked up, but he wasn't at all prepared for what he saw. He was just about to scream, when a harsh-sounding voice changed his mind.

"Okay, Fripp," the voice hissed. "You better not scream and you better not try to run. Just sit down and stay where you are. One false move, and the girl here's in big trouble!"

## Why was the maintenance worker threatening Vikki and Doctor Fripp?

To find out, read the conclusion of "The Case of the Golden Lining" in next month's issue of 3-2-1 CONTACT.





# Don't Be Afraid to Take This Halloween QUIZ

by Megan Stine and  
H. William Stine

Black cats, witches, pumpkins, bats and broomsticks. It's soon going to be time for your favorite spooky holiday.

Halloween has been around for more than 1,000 years, but it has changed a lot in that time. The first Halloween nights were scary. People built huge fires. They tried to drive away "evil spirits" by jumping through the flames. Later, it became a day to celebrate the fall harvest. Apples, pumpkins and nuts popped up on the scene.

Want to find out more about Halloween? Then try this quiz. But watch out—some questions may sneak up on you.

**1.** People bob for apples because they are the only fruit that floats.

**True or False?**

**2.** People first wore costumes to hide from witches and ghosts.

**True or False?**

**3.** In the old days, people played tricks and fooled others into thinking real goblins had done it.

**True or False?**

**4.** It's safer to wear a white ghost costume than a witch's black one at night.

**True or False?**

**5.** One of the ingredients in candy corn comes from real corn.

**True or False?**

**6.** Halloween used to be called "Nutcrack Night."

**True or False?**

**7.** At night, black cats see better than people.

**True or False?**

**8.** Jack-o'-lanterns were once carved out of potatoes instead of pumpkins.

**True or False?**

Answers on the next page.



# Quiz Answers



1

**False** If anyone tells you apples are the only fruit that floats, tell them they're all wet. Oranges and lemons float. So do grapes. You can even bob for bananas!

If something is more dense—more tightly packed—than water, it sinks. If it is less dense, it floats.

So why do most people bob for apples? Years ago, you couldn't buy fruits all year round. In the fall harvest, people picked certain fruits, including apples and pumpkins. So fall is the time you bob for apples and eat pumpkin pie.

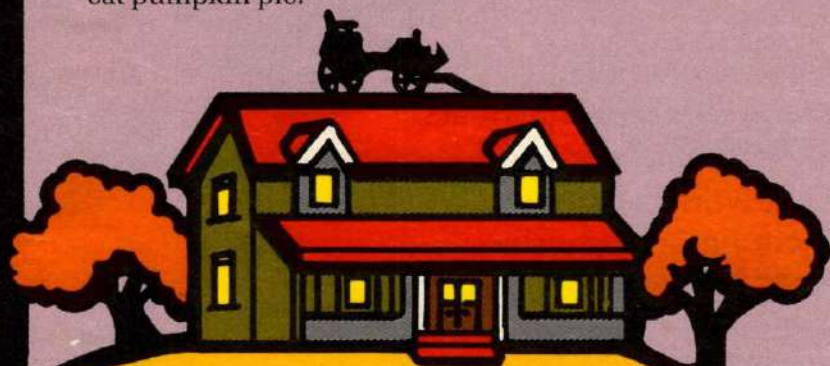


2

**False** People may have thought there were ghosts and witches. But they didn't dress up to *hide* from them.

They had a different idea.

They thought that if you dressed up like a ghost, the real ghosts would follow you. Then you could lead them away from your house and out of town. So there you would be—all alone in the country with a bunch of ghosts. Yikes! Maybe that's not such a good idea after all.



3

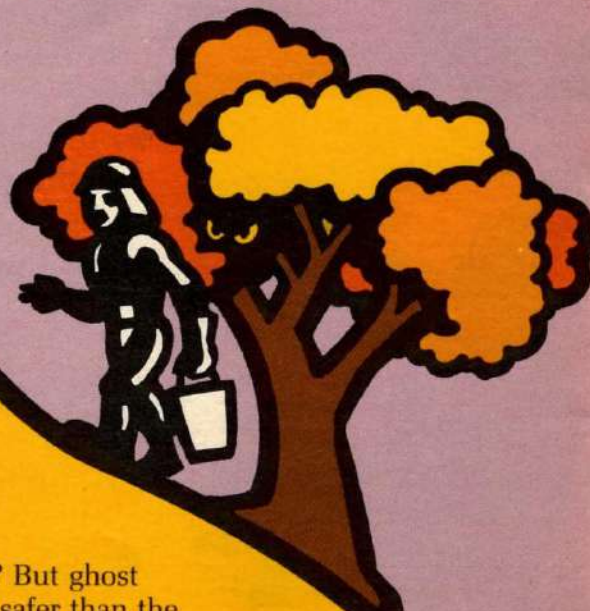
**True** People were very superstitious in the old days. Some folks thought there really were ghosts and goblins that came out on Halloween. So

what better time for kids to play tricks and blame it on the goblins! On "Mischievous Night," you could knock on someone's door and run away. Or you could get together with friends and lift the neighbors' buggy up onto the roof. The next morning, your neighbor might think that flying witches had been there doing mischief.

Today, people know there are no such things as ghosts and goblins. So playing a trick is less of a treat.

4

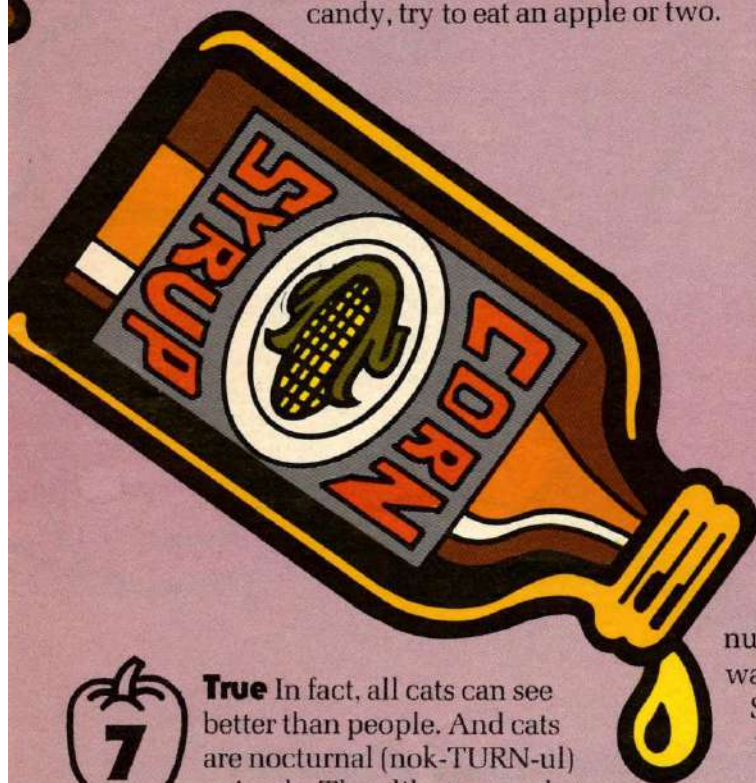
**True** Who would ever think that ghosts are easy to see? But ghost costumes are, because they are white. That makes them safer than the black costumes that witches wear. You know the rule. Wear white at night, so people driving cars can see you better. White things reflect light so they show up well. Dark things absorb, or draw in, the light rays. So if you absolutely *must* be Darth Vader this Halloween, at least carry a white trick-or-treat bag for your haul.





5

**True** Candy corn, like lots of other candies, contains corn syrup. This gooey liquid is made partly from corn. But don't let that fact fool you. Corn may be good for you, but corn syrup isn't. It's a type of sugar and it's just as bad for your teeth as any other sugar. So do yourself a favor this Halloween. Between nibbles of candy, try to eat an apple or two.



7

**True** In fact, all cats can see better than people. And cats are nocturnal (nok-TURN-ul) animals. They like to prowl at night. Because cats see so well and are spooky-looking in the dark, people long ago thought that cats guided witches. But cats really use their night sight for catching other night animals that they eat, like mice. Yuk!



6

**True** No kidding! People used to throw walnuts into the fire and wait for them to crack. They loved "Nutcrack Night" because they believed you could find out whom you were going to marry. One belief was that you should throw two nuts into a burning fire, naming each one for a different boyfriend or girlfriend. If the nut cracked and burned wildly, it meant that person would not be a good mate. A nut that burned evenly was a sign of true love. Sounds pretty nutty to us!



8

**True** In the country of Ireland, people used to carve jack-o'-lanterns out of potatoes and turnips at Halloween. But don't laugh. If it weren't for the Irish, we wouldn't have Halloween in America at all. Early settlers didn't celebrate the holiday. But then many Irish people came to this country and started up the fun. Of course, people soon realized that potatoes were fine for making french fries, but pumpkins were better for making jack-o'-lanterns.



# Any Questions?

## Why do bees make honey?

You may think that bees make honey for you to enjoy on pancakes and waffles. But they make it to eat for themselves.

A beehive is a honey factory. Thousands of bees make honey there during the spring and summer. Honey is made from the sugar liquid, or *nectar*, found in flowers. First worker bees suck the nectar from flowers. They store it in a part of their stomachs. Then they return to the hive.

Back at the hive, nectar is coughed up and stored in cells. Worker bees fan the nectar with their wings. Some of the water evaporates. What's left is honey.

Bees eat half their honey in the summer. They eat the rest of it during winter, when they stay inside their cozy hive. When the flowers bloom in the spring, the bees go back to work.

Question sent in by Syndi Schulz, San Juan Capistrano, CA.



## Why do we blush when we get embarrassed?

You are daydreaming in class when the teacher calls on you to answer a question. "What?" you say. The class giggles and your face suddenly feels hot. You are embarrassed, so you blush.

When you are embarrassed, you get excited. Your heart pumps blood faster. At the same time, your brain is sending signals to tiny blood vessels in your face called *capillaries*. These signals cause the capillaries to get wider. The tiny tubes can now carry the extra blood that your heart is pumping.

Whoosh! The capillaries swell with blood. You cannot control it. Blushing happens by itself—whether you like it or not. Your face gets very warm. If your skin is light enough, that rushing blood turns your face bright red. How embarrassing!

Question sent in by Shelly Gruhlke, Zumbro Falls, MN.





Do you have a question that no one seems able to answer? Why not ask us? Send your question, along with your name, address, and age, to:

**Any Questions?**  
**3-2-1 CONTACT**  
P.O. Box 599  
Ridgefield, NJ 07657

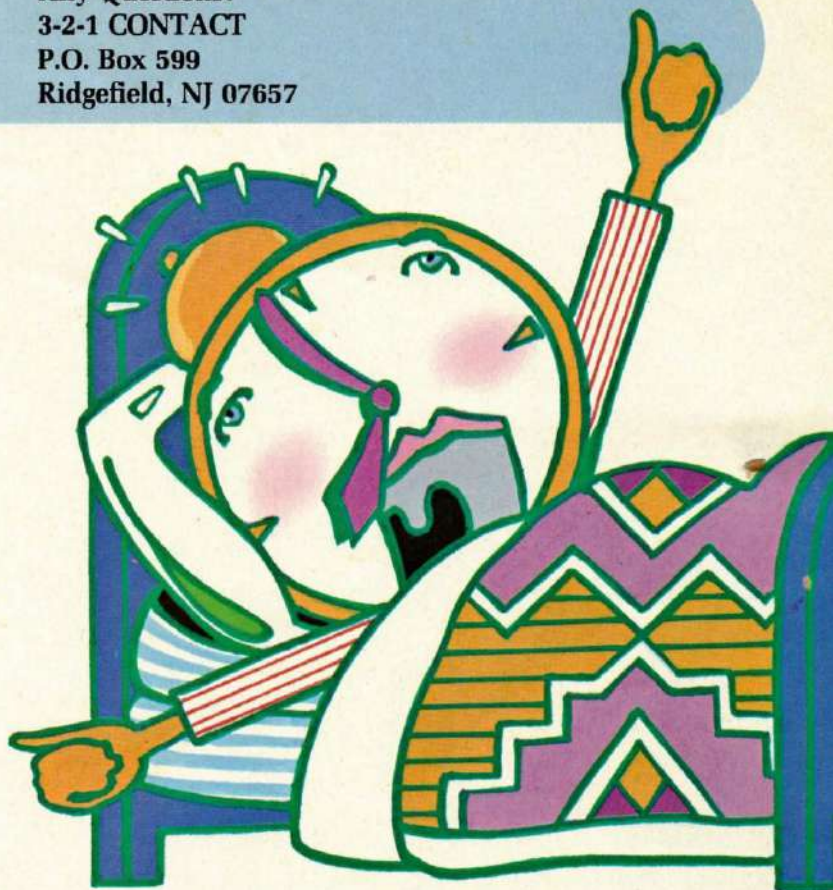
## What makes you fall asleep?

You know the legend of Rip Van Winkle. Old Rip fell asleep for 20 years. It sounds unbelievable, but you will probably sleep over 20 years in your life too. Of course, you will spread all that sleeping out. Most people sleep about eight hours each night.

Have you ever forgotten to set your alarm clock at night? Even though the alarm never goes off, you wake up close to your regular time anyway. People have a way of measuring time. Inside us is a kind of clock. It measures each 24-hour day. Because of this, you know when to do certain things, such as fall asleep and wake up.

Scientists have a pretty good idea of how you fall asleep. Inside part of your brain are "wake-up" centers. These keep you alert all day. At night, these centers are somehow turned off. No one knows exactly what causes this. But when it happens, your heartbeat slows down. So does your breathing. Before you know it, you're in dreamland. Zzzzzzz.

Question sent in by Jenny Canavan, Las Vegas, NV.



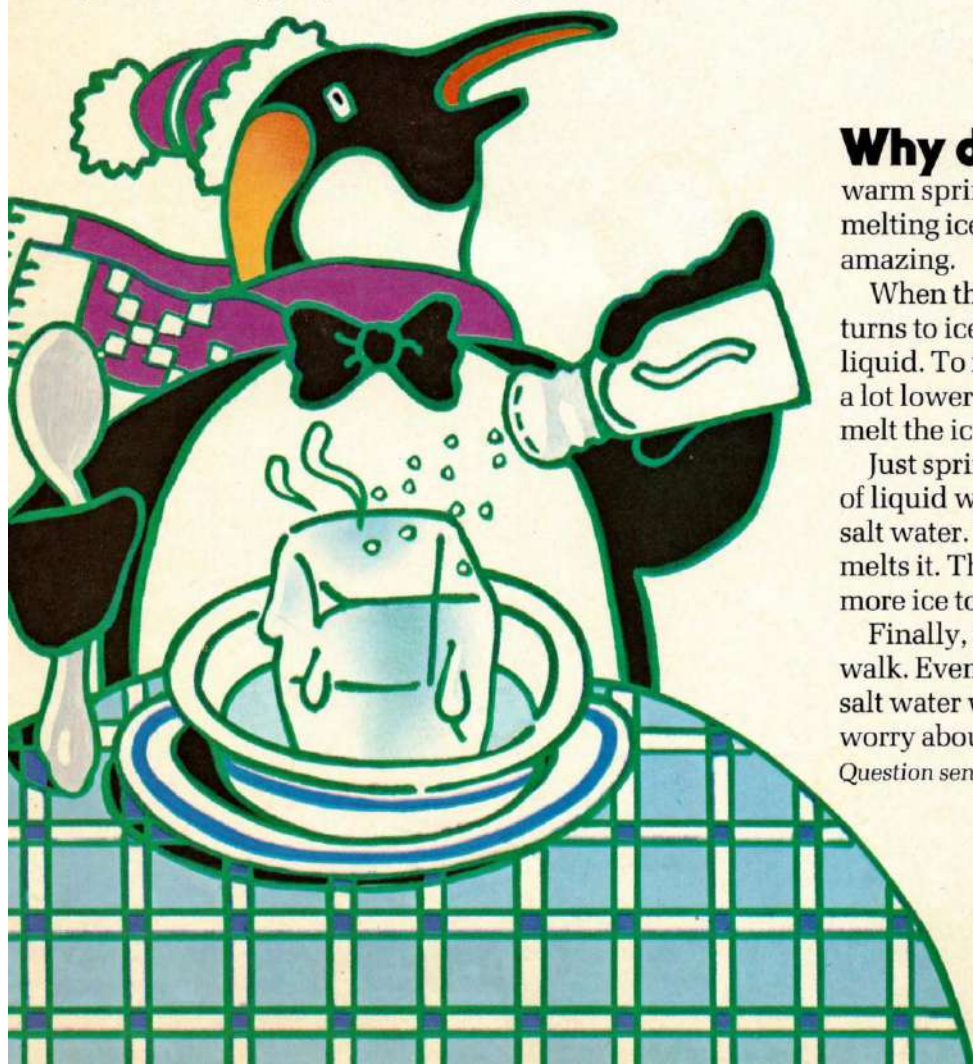
**Why does salt melt ice?** Next to warm spring weather, salt is the best thing for melting ice. Salt mixed with water can be pretty amazing.

When the temperature is freezing, fresh water turns to ice. But not salt water. At 32° F (0°C) it stays liquid. To freeze salt water, the temperature must be a lot lower. That works out well when you want to melt the ice on your sidewalk.

Just sprinkle salt on the ice. It mixes with tiny bits of liquid water on the surface of the ice. That makes salt water. The salty water seeps into the ice and melts it. That makes more salt water. That seeps into more ice to make it melt. Get the idea?

Finally, there is no more ice—just a salty sidewalk. Even though the weather is still freezing, that salt water will stay melted. And you don't have to worry about slipping and sliding.

Question sent in by Preston Brown, Allegan, MI.







**321 CONTACT**

P O S T E R

# TRICK OR TREAT!









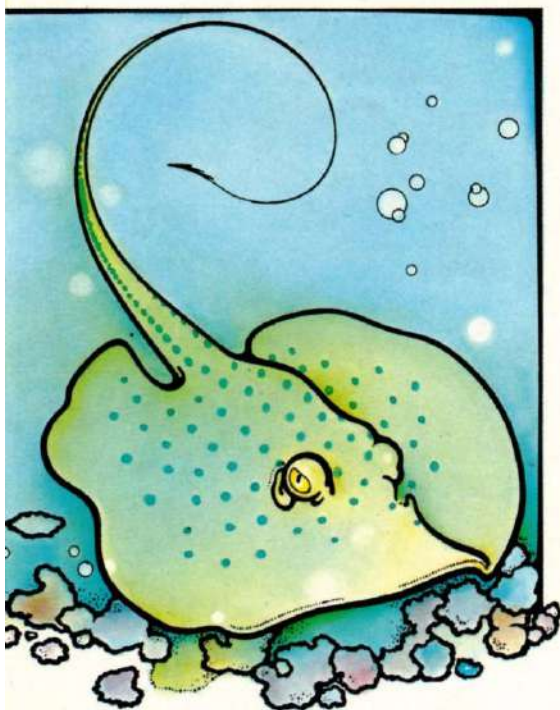
# List of the Month

## Nature's Nasties

by Renée Skelton

Plants and animals can't tell you to leave them alone. But some contain poisons that can make you sorry you bothered them. Here are some to stay away from:

**Nightshade** Long ago, evil people used *deadly nightshade* as a poison. Today it is used by doctors—to help people. Know the drops you get during an eye exam? These contain bits of this plant. They make your vision blurry. The potato plant is also a nightshade. Its leaves, stems and roots are poison. But, as all you french fry freaks know, the white *tuber* is just delicious!



**Stingray** These flat fish with long tails are found in warm, shallow waters. They like to lie still at the bottom, covered with mud or sand. Every so often, an unlucky swimmer will step on a stingray. That makes the ray angry. It jabs the stinger at the end of its tail into the swimmer's foot or leg. The sting won't do lasting damage, but it sure does hurt!

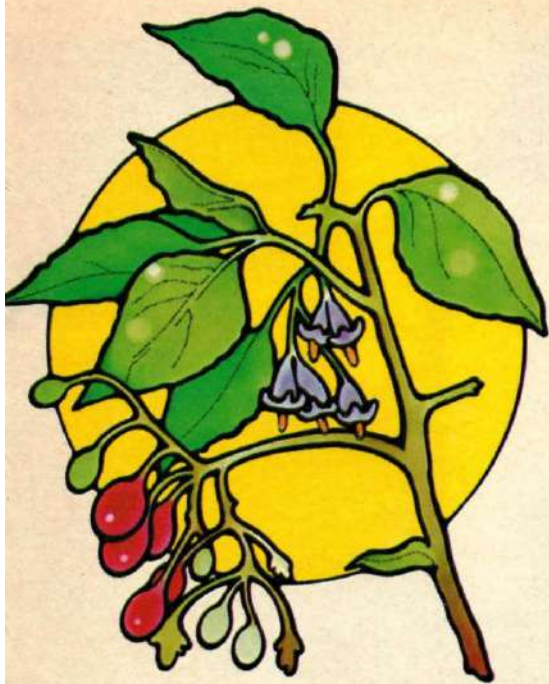


**Scorpion** This animal lives in the desert of the southwest U.S. It uses a stinger at the end of its tail to protect itself and get food. When a scorpion catches an insect or spider it jabs the bug with its poisonous stinger. That paralyzes the scorpion's dinner while he eats it. Sometimes scorpions sting people. But when they do, they're only trying to protect themselves.



**Cobras** These snakes wiggle out of baskets to the movements of snake charmers. But don't let that fool you. A cobra bite can kill. Some cobras don't even have to bite to hurt an enemy. One African cobra spits poisonous venom into the eyes of an enemy—sometimes causing blindness. But venom does have its good uses. The cure for painful symptoms of snakebite is made from snake venom!



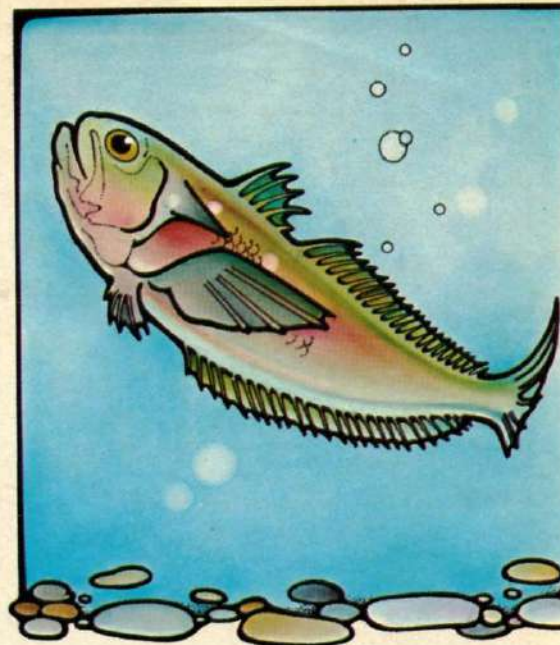


**Mushrooms** There are many kinds of mushrooms. Most are safe to eat, but some are poison. Only experts can tell the difference. Years ago, people tested mushrooms by putting a silver spoon in the pot while they were cooking. If the spoon turned black the mushrooms were poison. Trouble was, the test didn't work. So, to be safe, never eat wild mushrooms. Stick to the ones you find at the store.

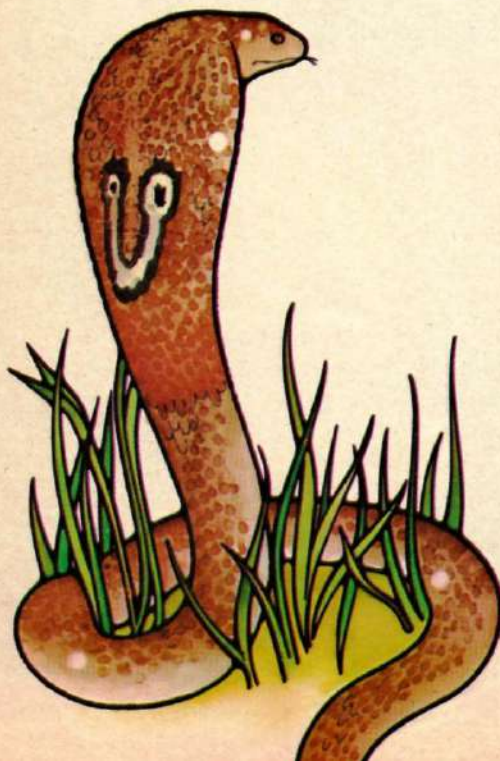
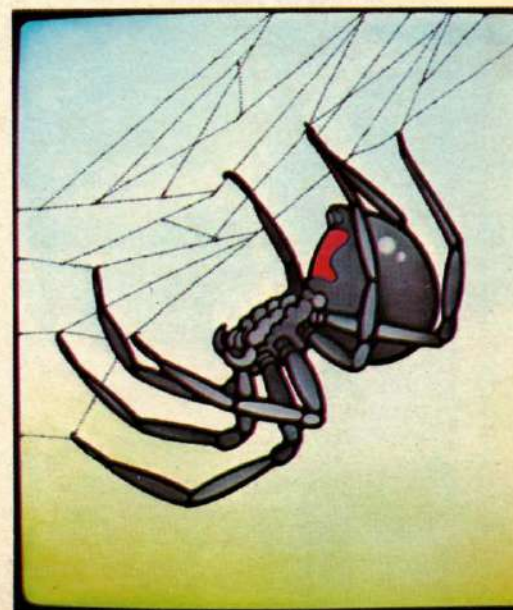


**Gila Monster** These American desert lizards don't look for fights. But if you get one angry enough, it will bite. That doesn't mean you'll get poisoned. The gila monster's poison is stored under its bottom teeth. It has to bite while on its back for the poison to drip down into a wound. Most people are bitten by gilias while picking them up. The best way to keep out of trouble? Leave them alone!

**Weeverfish** Unless you live on the coast of Africa or Europe, you'll probably never run into this fish. Lucky you! The weeverfish is like an underwater porcupine. It has spines on its back. These can stick in the skin and cause poisoning. Fishermen sometimes have problems when weevers get caught in their nets. When they try to remove the fish—OUCH!—they get stung.



**Black Widow Spider** Spiders look scary, but most won't hurt you. One that can be dangerous is the black widow. It uses its fangs to bite and inject insects with poison. Then the spider sucks out the insect's insides. But that can't happen to you. Besides, these spiders only bite if you invade one of the dark corners they hide in. Otherwise, they would rather leave you alone.

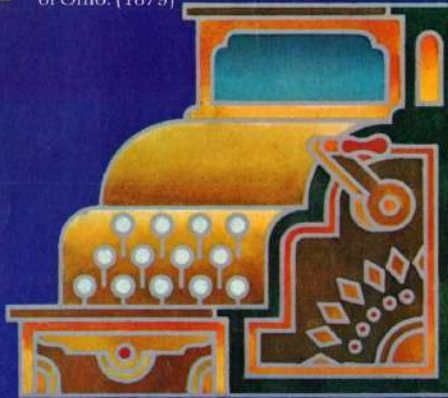




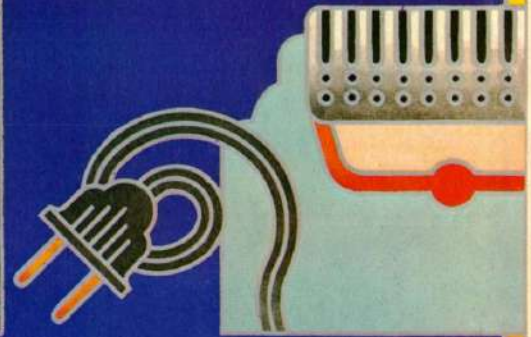
**3** The first automobile show takes place in New York City. (1900)



**4** The cash register is invented by James J. Ritty of Ohio. (1879)



**6** Colonel Jacob Schick patents the first electric razor. (1928)



**7** Birthday of Marie Curie, scientist who discovered radium. (1867)



**10** The first coast-to-coast call without the aid of an operator is made. (1951)



**13** V. J. Schaefer produces the first artificial snow from a natural cloud. (1946)



**15** Birthday of Sir William Herschel, scientist who discovered the planet Uranus. (1738)

**17** Explorers Lewis and Clark reach the Pacific Ocean. (1805)

**19** Astronauts Conrad and Bean walk on the moon. (1969)







26

Happy Thanksgiving all you turkeys out there!

27

Birthday of Anders Celsius, inventor of the celsius or centigrade thermometer. (1701)

30

Put away your umbrellas. The hurricane season is officially over.

S M T W T F S

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Earth Days

November



# FLYING INTO THE STORM

## RIDE WITH A HURRICANE HUNTER

by Druce Schechter



Hurricanes can kill. The people of Galveston, Texas, learned that 80 years ago. That's when a terrible hurricane destroyed their city. Storm winds blew in from the Gulf of Mexico. They traveled at speeds of 120 miles per hour. Trees were torn up by their roots. Rocks were thrown through the air. The winds also piled up water from the gulf into a 25-foot-high watery wall known as a *storm surge*. The storm surge swept over the city. More than 5,000 people lost their lives.

This hurricane was one of the worst disasters in American history. It taught the citizens of Galveston that they must protect themselves in the future. When they rebuilt their city, they added a seawall. This would guard against the storm surges that other hurricanes might bring.

In 1900, very little was known about hurricanes. That's why the Galveston storm took so many lives. The weather bureau couldn't give people an early warning of a killer storm's approach.

Today, a lot more is known about hurricanes. There are warnings from the weather bureau be-

**Above:** This large airplane flies scientists right into the center, or eye, of a hurricane.

fore a storm arrives. Now, people along the coast can board up their homes and head for safety. Much of the life-saving knowledge about hurricanes comes from the brave people who fly airplanes right into the center, or eye, of these monster storms.

### Meet the Hurricane Hunter

Jan Zysko is a hurricane hunter. He has flown into the eyes of more hurricanes than he can remember. But he does not consider himself especially brave. Instead, he thinks of himself as a weather scientist. Jan just does what he must do to learn about hurricanes.

Jan works with a crew of several other hurricane hunters. They fly into many storms during each year's hurricane season. Their plane is a large four-engine craft. It is built especially for hurricane missions. The inside is full of computers, radar,



radios and other scientific instruments. All this equipment makes the plane a flying laboratory.

A year ago last summer, Jan and the other hurricane hunters flew into Hurricane Allen many times before that storm struck Texas. Allen was a terrible storm which had already killed about 275 people. The scientists were eager to get more information and help the people in Texas get ready for the hurricane.

During their flights, the hurricane hunters felt as if they were riding over a rough street in a rickety old car. It was Jan's job on each flight to drop instruments called windsondes (wind-SONDS) into the storm. A windsonde is a copper-coated tube about two feet long and three inches thick. Inside are weather instruments. They measure the temperature, air pressure and wind speed.

To drop a windsonde, Jan uses a tube that sticks out of the airplane. A high shrieking noise is heard every time he lets one go. That's because the air inside the plane's cabin tries to rush out of the tube. A parachute pops out of the windsonde and lowers it through the storm.

The falling windsonde takes measurements of what is happening in the storm. These readings are fed into the plane's computer. From there, this information goes to a satellite. The satellite beams it to a ground station in Virginia.

Then weather forecasters in Washington, D.C.,



**Above:** Jan Zysko uses a computer to collect information about an approaching storm.

and Miami, Florida, get the information. They decide where a storm is likely to strike and how bad it will be. These forecasters were able to warn people in Texas about Hurricane Allen. As a result, only four people there were killed. ➡➡



**Above:** Hurricane winds are very powerful. They can easily blow down telephone poles, trees and houses.



**Above:** High waves hit the shore with great force during a storm. They can sweep houses away.



## Looking for a Lost Boat

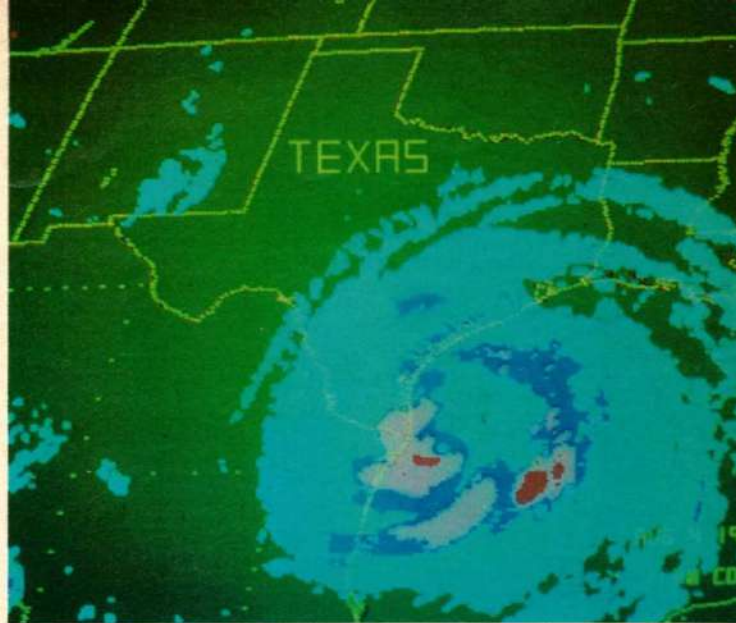
The hurricane hunters sometimes have to tackle other jobs, too. During Hurricane Allen, for example, the Coast Guard radioed Jan's plane. A 30-foot sailboat was missing somewhere in the storm. Could the hurricane hunters look for it? This was a dangerous job, but they decided to try.

Flying only 1,000 feet above the gulf, they searched the foaming waters. Trying to find the white boat was like searching for a polar bear in a snowstorm. And at that low altitude, the hurricane hunters couldn't tell what the winds might do to their plane.

But suddenly there was a problem. Jan and the others heard a noise from the outside of the plane. A part had come loose and was banging on the plane's belly. They didn't know exactly what was happening, but it sounded serious. The hurricane hunters were forced to return home without finding the lost boat. Later, they learned that the noise had come from some radar equipment. It had been knocked loose when lightning struck the plane.

## Right in the Eye

The part of their work that Jan and the others like best is flying into the eye of a storm. Approaching that area, they can feel the force of the strong winds in the clouds that surround the eye. The wings of the plane shake. Icy rain hits the



**Above:** This computer picture taken by a weather satellite shows Hurricane Allen nearing Texas.

window and the air grows dark. Then suddenly, the plane plunges into the eye. Here the air is calm. The sun is shining. Down below, the sea is still rolling with 50 foot waves. The clouds around the eye look like mountains of whipped cream.

Inside the eye itself, all is peaceful. It is hard to believe that beyond this wall, one of the worst storms on earth is raging. But it is. And in a few moments, the plane will cross the 10-mile storm center. Then it must enter the other side of the storm. Buckle your seatbelts!



**Left:** There's more than one way to get a good look at a hurricane. This picture was taken from an Apollo space ship. The storm developed over the Pacific Ocean near Hawaii.



# Hurricane Maze

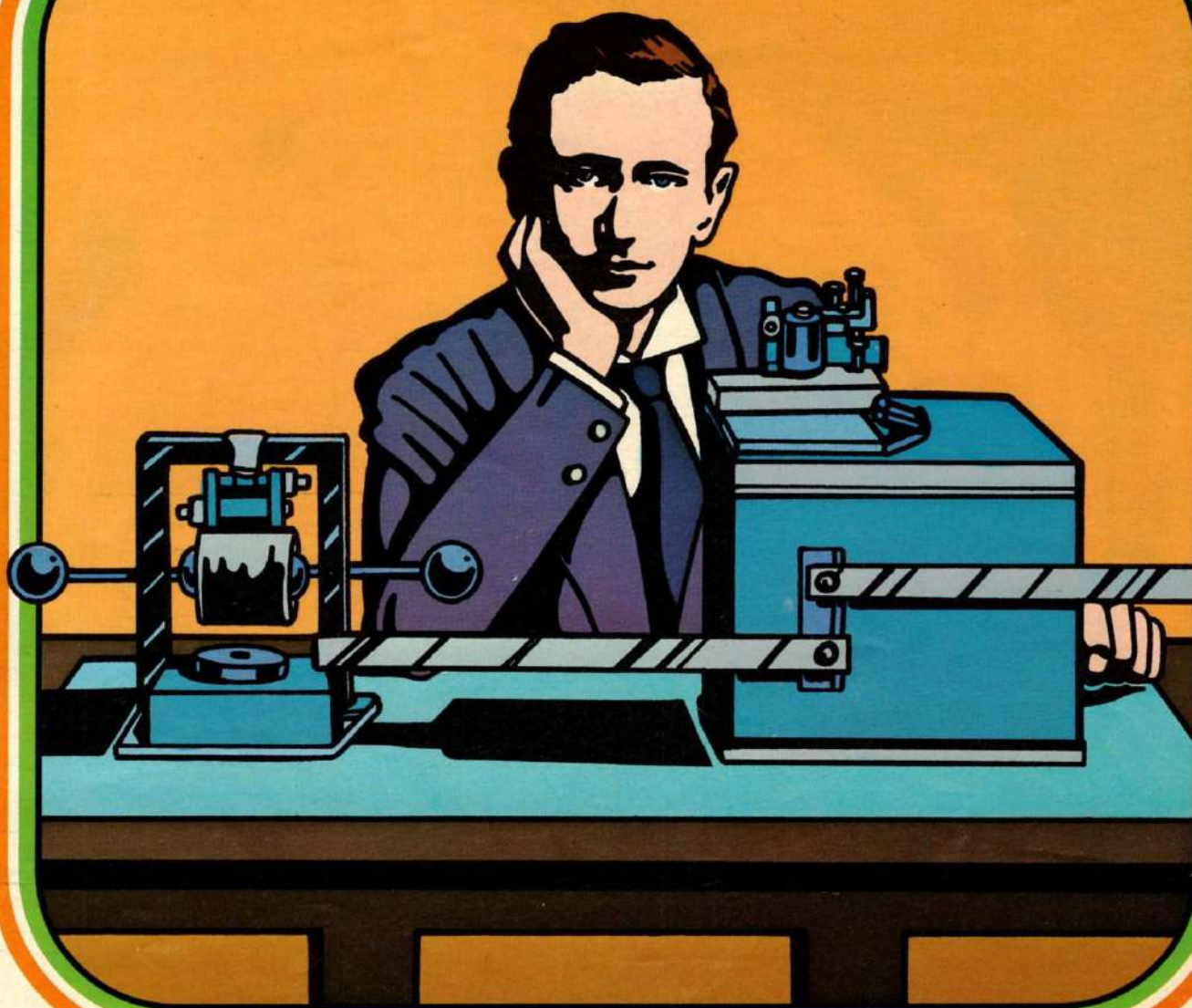
Can you find your way from the outside of this hurricane to the center? Only one of the four cloudpaths will take you there.

FINISH

Answer on page 37.



# Timeline



The first radios, built by Marconi, were very large.

## History of the Radio

by Pat Glossop

### Past

In 1895, a young Italian inventor named Guglielmo Marconi built a new machine for sending messages. To test it, he went into a valley near his house. After hours of trying, Marconi sent a message to his brother a mile away. His brother answered by shooting a rifle into the air. That shot announced the birth of a new invention—the radio!

To you, radio is probably something you listen to when the television set is broken. But when it was first invented, radio was an important new form of communication. The only other ways of sending messages

were by telephone or telegraph. These machines need wires. But radio messages travel through the air on invisible waves. They can go almost anywhere. In 1901, Marconi proved this by sending a message across the Atlantic Ocean.

If you listened to one of the first radios, all you would hear were noisy clicking sounds. To send a message a person could understand, a language of short and long clicks, called *Morse code*, was used. People's voices were first heard on radio in 1905, thanks to the work of inventor Victor Poulsen.

By the 1930s, most American families owned a radio. They tuned it in for news and entertainment. Comedy and adventure shows were popular. Some of today's TV characters, like Buck Rogers, got their start on radio.



## Present

Today radio is still an important form of communication. When people want to know last night's baseball scores, or tomorrow's weather, they turn on the radio.

Modern radios work the same basic way that the early ones did. First, there must be a *transmitter* at the radio station. After sound is turned into radio waves, the transmitter sends the waves out. Inside your radio is a *receiver*. It catches the radio waves and turns them back into sound.

Today's radios may work the same way as early ones, but they look very different. This is due mostly to one important change. In 1947, metal chips called *transistors* were invented. These tiny chips serve as a radio's receiver. Transistors take up so little space that it is

possible to build much smaller radios. Once, radios came in heavy wooden cabinets. Now they are small and light enough to hold in your hand.

Besides entertaining you, radio is also helpful. Police officers in patrol cars are called to the scene of a crime by radio. Fire fighters use walkie-talkie radios to communicate with each other. Then there are the citizen band radios, known as CBs. They let people chat while driving along in their cars.

Radio is important out in space as well as on earth. Spaceships that fly to distant planets send back information on radio waves. And when astronauts first landed on the moon, they sent back word by radio. Who knows what Marconi might have thought about that?

# Timeline

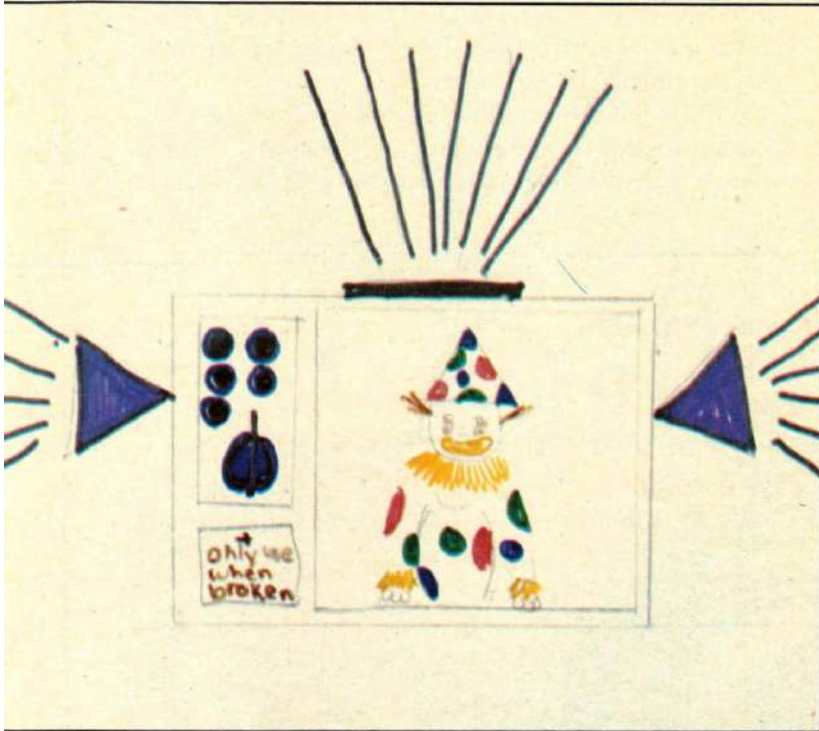


Today's radios are smaller. Some will fit into headphones.



# MAIL

**Future TVs!** Thanks for sending in all those great ideas for future TVs. Here are a few of our favorites.



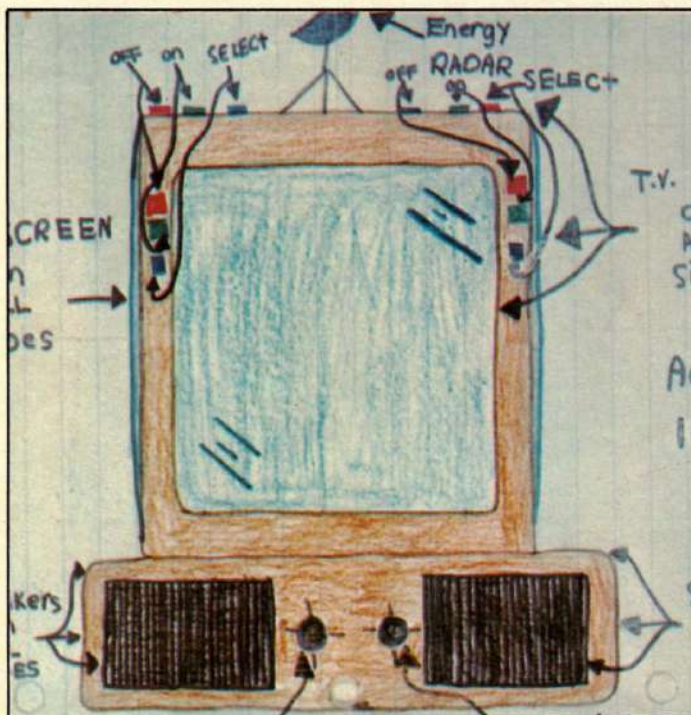
**Nicole Elam**, Inglewood, CA.

This future TV doesn't use electricity. It runs on carbon dioxide.



**Chris Corimski**, Pittsburgh, PA.

This triangular TV fits into very sharp corners.



**Mark Kozlowksi**, Louisville, OH.

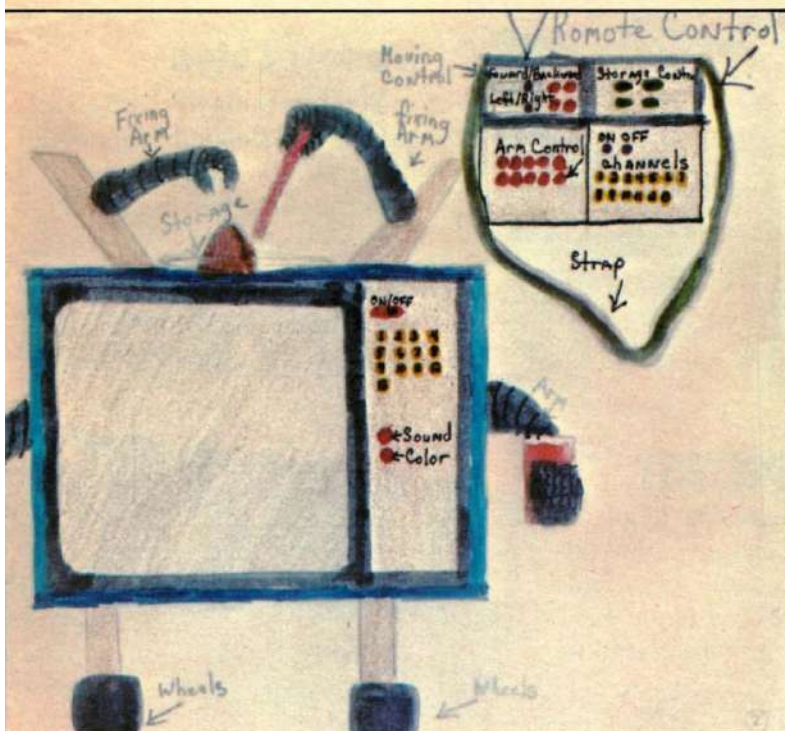
Mark's TV is a cube with screens on four sides. It also runs on solar power.



**Paula Diamond**, Montreal, Quebec, Canada.

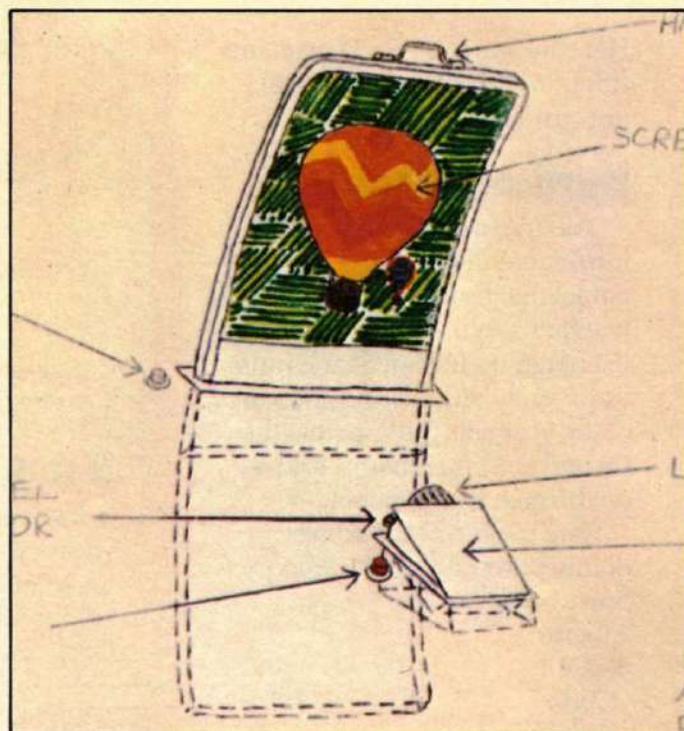
Paula's TV picks up baseball games on other planets.





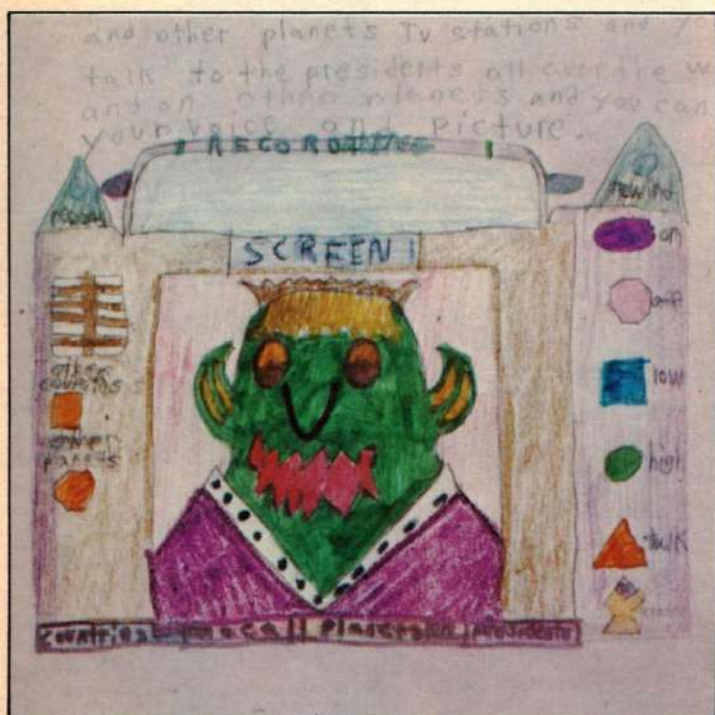
**Larry Zabriskie**, New York, NY.

With its own arms, this future TV can adjust itself.



**Andy Black**, Columbus, WI.

Andy's TV has a giant screen that folds down into the floor when you're not watching.



**Cynthia Miskimen**, Brighton, CO.

You can talk to presidents all over the world—and see what's going on in space with this TV.

## Timeline

### Send Us Your Future Radios

We just told you about the radio of the past and present. Now give us your ideas about what the radios of the future will be like. Will they be small enough to fit in your ear? Will you be able to see a 3-D picture of the musicians who are playing? Draw your future radio and tell us what it does. Our favorites will win T-shirts. Send your radio, name, address and T-shirt size to:

**Timeline: Radio**  
**3-2-1 CONTACT**  
**P.O. Box 599**  
**Ridgefield, NJ 07657**



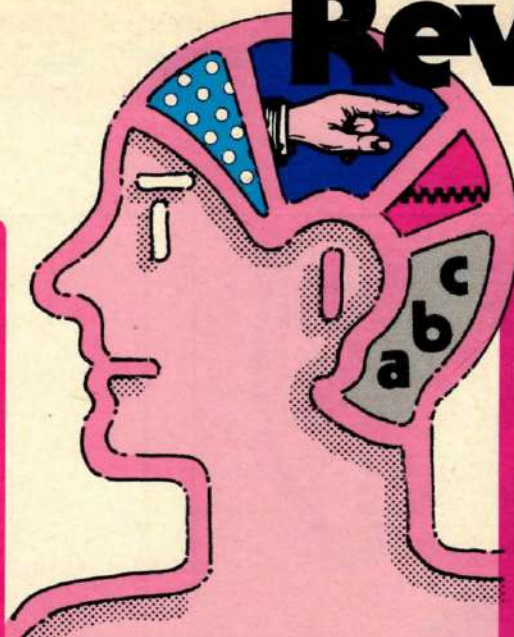
Here are some books to read and things to do after reading this issue of 3-2-1 CONTACT:

## Hurricane Oscar?

You may have noticed that hurricanes always have people's names. Each year, an international weather service comes up with a list of names for hurricanes and tropical storms. The first storm of the year gets the A name; the second gets the B name, and so on through the alphabet.

Here is a list of the names planned for next year's Atlantic hurricanes:

Alberto  
Beryl  
Chris  
Debby  
Ernesto  
Florence  
Gilbert  
Helene  
Isaac  
Joan  
Keith  
Leslie  
Michael  
Nadine  
Oscar  
Patty  
Rafael  
Sandy  
Tony  
Valarie  
William



## 3-2-1 CONTEST

Each month in Any Questions? we answer questions our readers send to us. Now we want to see how you do with one. Erin Quirk asked us: Which is more



important, your brain or your heart? Write and tell us what you think the answer is and why. We will choose the five answers we think are most interesting. And we'll send each winner a CONTACT T-shirt. Keep your answer short—100

words or less. Send it, along with your name, address and T-shirt size to:

3-2-1 CONTACT  
Answer Contest  
P.O. Box 599  
Ridgefield, NJ 07657

## Desert Tales

You can find out more about camels and the Bedouin people of the Middle East. Here are some books to look for at a library or bookstore.

### Camels: Ships of the Desert

Every part of the camel is made to suit its hot, dry desert home.



John Waters tells you all about this strange animal in this book published by Thomas Y. Crowell Company.

**Wonders of Camels** Did you know that some camels have more than one hump? Or that some people once used camel fat as the cure for a cold? This fun book is loaded with interesting facts and funny stories about camels. *Wonders* was written by Sigmund Lavine and published

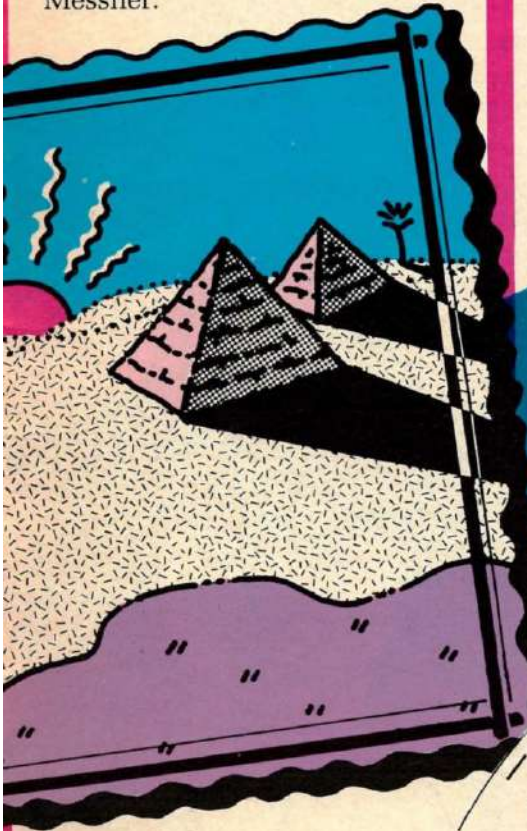




# Previews

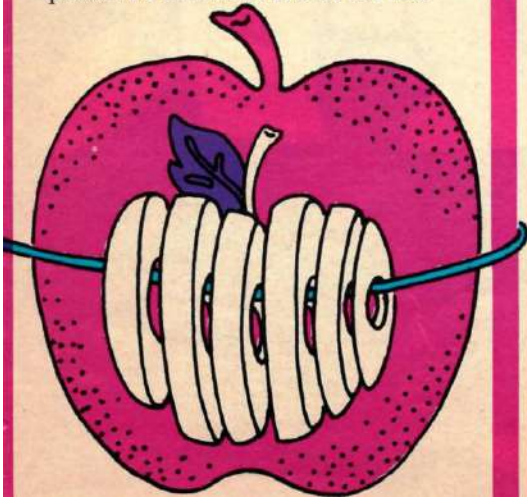
by Dodd, Mead and Company.

**Jordan** Abdullah and his family live in the Middle Eastern country of Jordan. If you'd like to find out more about the way people live in this desert land, read this book by Frederick King Poole. It's published by Julian Messner.



## Apple Snack

Years ago, fall was the time to preserve summer fruits for the



coming winter. One way was to dry them. Today, dried apples are still a great snack. They're easy to make. Here's what to do.

You need an apple, a knife, a piece of string and a towel.

Peel the apple and remove the core. Slice it into thin, doughnut-shaped pieces. Hang the pieces on a string in a warm, dry place. You might want to cover them with a towel. After three weeks, your treat will be ready.

## Shooting Stars

There is going to be a meteor shower on the night of November 2. It won't be as spectacular as the one we told you about last August. But if it's a clear night, and you're really patient, you should see some shooting stars.

For the best chance to see them, start looking after 9:00 P.M., in the eastern part of the sky. Good luck!



## Michigan Museum

This review was sent in by Mary Lingeman, Okemos, MI.

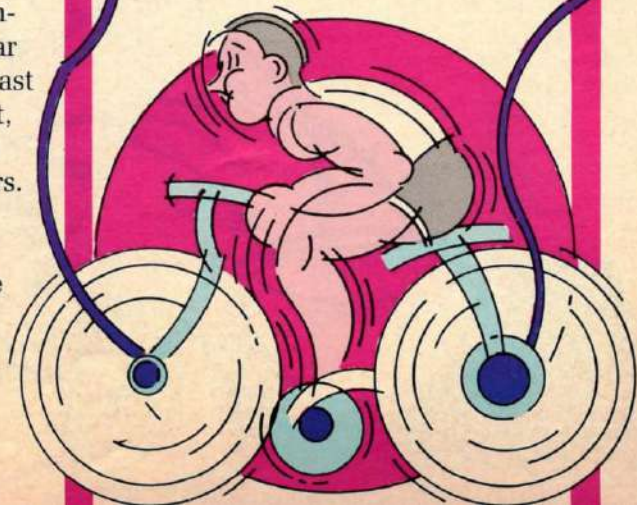
I visited a museum in Lansing, Michigan, made for kids. It is called *Impression 5* and is the kind of museum where you can touch and feel.

There is a cave tunnel and an optical illusion corner. You can see magic tricks that are really chemical science. There is a place where you can make an electric light bulb turn on when you ride a bike, and many other science projects.

There is a small fee but it is worth it.

If you visit a museum, why not write a review for *CONTACT*? If we use it in the magazine, we'll send you a *CONTACT* T-shirt. Send your review of 100 words or less, your name, address and T-shirt size to:

3-2-1 *CONTACT*  
Museum Review  
P.O. Box 599  
Ridgefield, NJ 07657





# Experiment

## Invisible Ink

Here's a trick to try for Halloween. Write a message that no one can see. Then make it appear—like magic.

### What You Need

- a lemon or a few drops of vinegar
- a cup
- a piece of thin white paper
- a toothpick
- a 100 watt light bulb

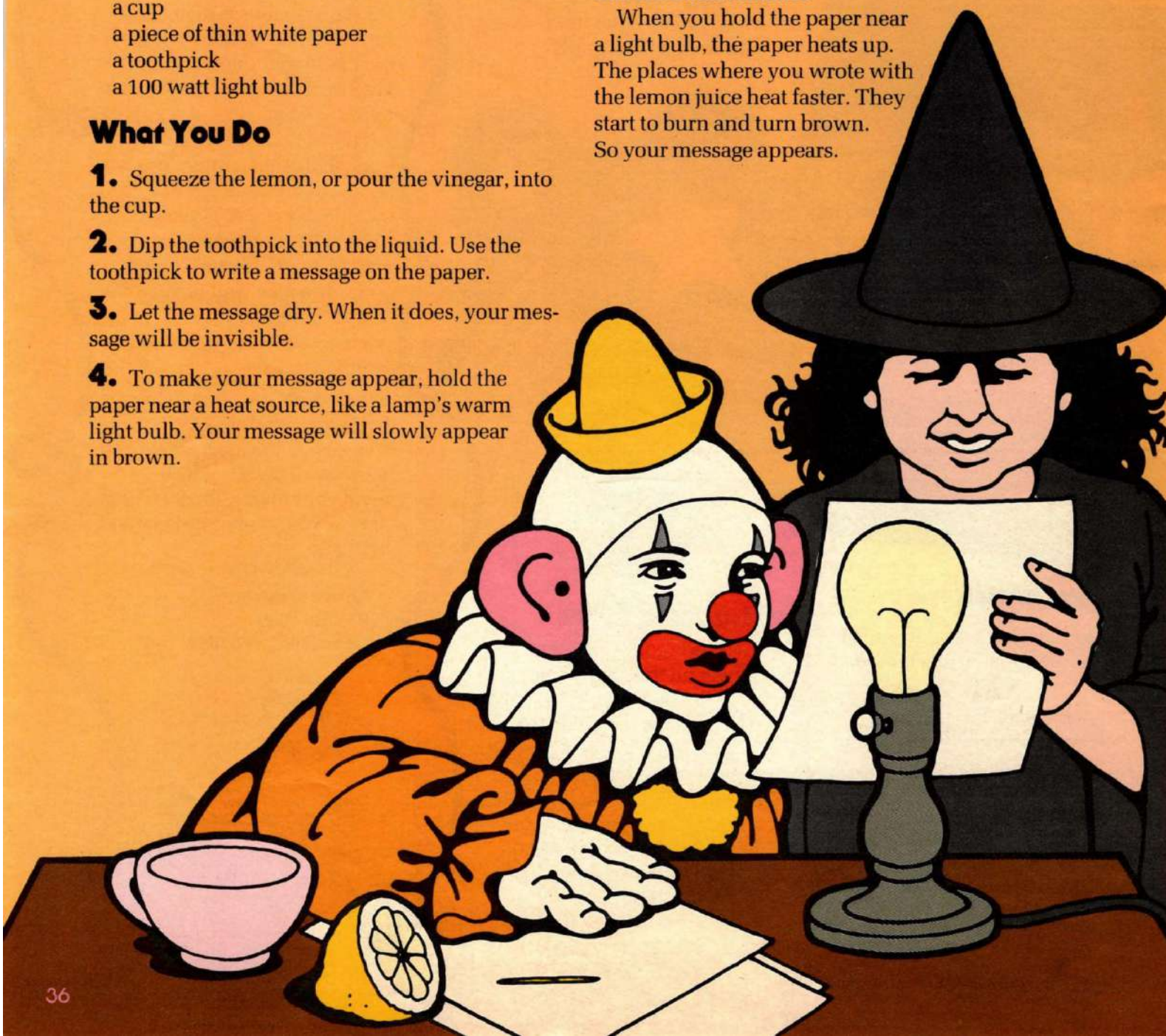
### What You Do

1. Squeeze the lemon, or pour the vinegar, into the cup.
2. Dip the toothpick into the liquid. Use the toothpick to write a message on the paper.
3. Let the message dry. When it does, your message will be invisible.
4. To make your message appear, hold the paper near a heat source, like a lamp's warm light bulb. Your message will slowly appear in brown.

### Why It Works

After the lemon juice dries, it looks as if you are left with a plain white piece of paper. But you're not. A chemical in the juice makes the paper more sensitive to heat. And even after the paper dries, this chemical remains.

When you hold the paper near a light bulb, the paper heats up. The places where you wrote with the lemon juice heat faster. They start to burn and turn brown. So your message appears.



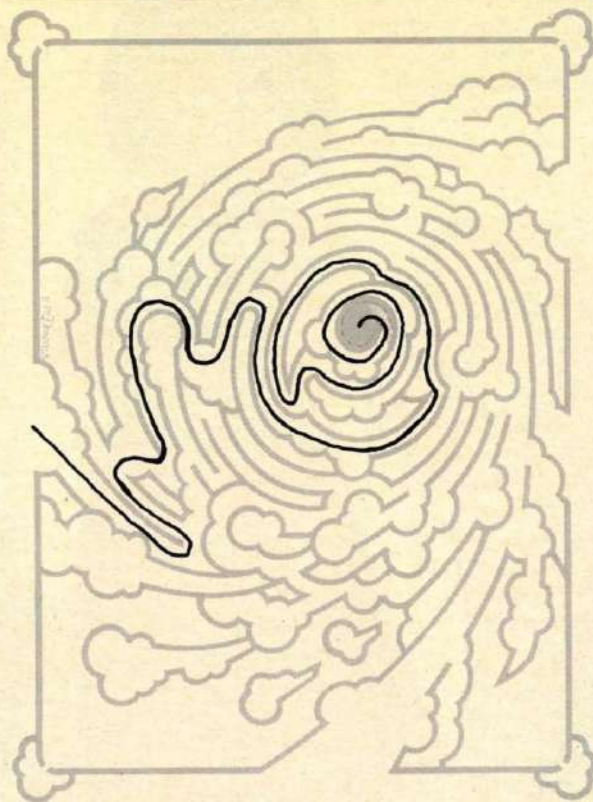


# Did It!

## Answer

### Hurricane Maze

(page 29)



## Thank You!

Thanks to Jan Zysko and the people at NOAA's Research Facilities Center for their help with the hurricane story.

## Credits

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Here's a sample of what you'll find in next month's issue of 3-2-1 CONTACT:

## Woof!

Ever hear of a dog without hair? Find out about it, and other dog breeds.

## Name That Town

How Pie Town, New Mexico, and seven other cities got their names.

## Bloodhound Gang

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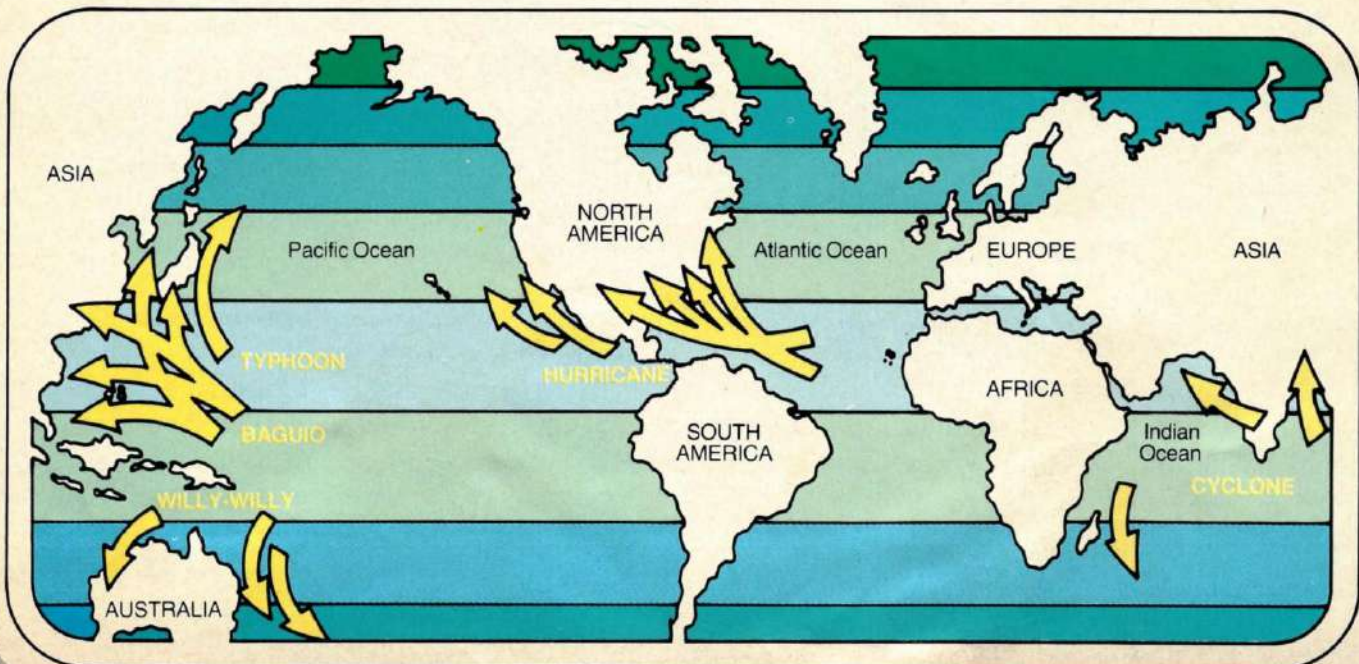
## Earthfacts: Hurricanes

Each month CONTACT will bring you another Earth Works. Save these pages in a notebook. Soon you will have your own guide to the wonders of the planet earth.

# EarthWorks

- Before 1979, all hurricanes in the United States were given girls' names. Now, to be fair, every other hurricane gets a boy's name.
- When a hurricane hits land, it blows down houses and crops. Winds may reach 200 miles per hour. At that speed they can snap trees and telephone poles in two like toothpicks.
- Hurricanes also bring heavy rains and floods. Worst of all is the *storm surge*, a fast-moving wall of sea water. A surge can be over 20 feet high. Riding on top of the surge are powerful waves that smash everything in their path.
- Around the world, hundreds of people are killed by hurricanes each year. The worst hurricanes happen in August and September. By summer's end, the ocean is very warm. And the warmer the water that gives birth to a hurricane, the fiercer the storm will be.
- Hurricanes become weaker after they reach land. With no more hot, moist air available from the ocean, the winds begin to slow down. But they don't always die quietly. Sometimes a hurricane sets off whirling wind storms called tornadoes.
- Hurricanes occasionally help people. In some parts of the world, no crops grow unless hurricanes first bring rain.
- Most American hurricanes develop over the Atlantic Ocean or the Caribbean Sea. Winds carry them to the coast where they often blast Texas or Florida. Hurricanes also strike other states and sometimes even go as far north as Maine.
- Weather scientists hope someday to be able to break up hurricanes. One experiment in storm control is called Project Stormfury. In this project, scientists fly above a hurricane and drop chemical crystals. The chemicals cause the clouds to rise and the winds to slow down. Only three storms have gotten this treatment so far, however. For now, the best that scientists can do is give people an early warning whenever a hurricane is coming.

**This map shows you the places where hurricanes begin. Follow the arrows to find the direction that they usually travel once they get started. The words in yellow show you what hurricanes are called in different parts of the world.**





Strong hurricane winds can do great damage.

## Focus on Hurricanes

by Joan Chambers

This is hurricane season. Right now, a violent storm may be forming over the ocean. Since June, the water has been heating up. Now it is evaporating quickly and moving into the air. As the moist air rises, cool air rushes underneath it.

Soon the cool air and the warm air begin spinning around. Because the earth also spins, these winds start going faster and faster. Once

they start blowing 75 miles an hour, they have reached hurricane force.

From a space satellite, the swirling clouds look like water going down a drain. In the center is the hurricane's eye. It is calm and quiet. But around the eye are walls formed by clouds. Strong winds blow inside these clouds and heavy rains fall.

Meanwhile, people living on the southeast coast of the U.S. watch the hurricane carefully. Should the storm come roaring toward them, they must be ready.

(continued on page 39)